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January, 1954

SOAP and Sanitary Chemicals

in this issue...

phasis on detergent sales
soap makers meet in NYC

* * *

rosols bought by eight out
10 consumers, survey shows

* * *

artling changes mark soap
industry's 40 year progress

* * *

weekly mailings to salesmen
boost sanitary supply volume

Cover photo . . . Melvin Fuld, pres-
ident of Fuld Brothers Co., Bal-
timore, was elected president of
Chemical Specialties Manufactur-
ers Assn. at 40th annual meeting
in Washington, D. C. last month.



SOLVAY

Reg. U. S. Pat. Off.

Flake • Small Flake • Solid

CAUSTIC POTASH

WHITE

in color —

exceptionally

LOW IN IRON!

Today, send for test samples and make your own comparison tests. Prove to yourself—
SOLVAY Caustic Potash is your *best buy*!

We are always ready to assist you with
SOLVAY's famous Technical Service as well
as the most complete, authentic information
available on the applications of SOLVAY
Caustic Potash to your particular situation.

● Also available in liquid form:

49-50% in Tank Cars

45% in Liquid Drums



Soda Ash • Caustic Potash • Potassium Carbonate
Caustic Soda • Calcium Chloride • Sodium Nitrite
Cleaning Compounds • Ammonium Bicarbonate
Chlorine • Snowflake® Crystals • Sodium Bicarbonate

Ortho-dichlorobenzene • Ammonium Chloride
Para-dichlorobenzene • Monochlorobenzene

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ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

Gentlemen:

Please send me the following at no cost or obligation:

SAMPLES: (90-92%) Solid Flake Small Flake
 Have your Technical Service contact me.
 FREE BOOK—"Caustic Potash and Potassium Carbonate."

Name _____

Company _____

Address _____

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fbi news

PRODUCTS PROSPECTS TRADES AND MARKETS

PUBLISHED BY FULD BROTHERS, INC., MANUFACTURING CHEMISTS • SANITARY CHEMICALS
702 S. WOLFE STREET, BALTIMORE 31, MD. • WEST COAST PLANT: LOS ANGELES 13, CALIF.

FOR THE
SANITARY
CHEMICAL
JOBBER AND
DISTRIBUTOR

CHEMICAL RESERVE BUILDS CASH RESERVE FOR JOBBER SALESMEN

FAMOUS FACTS THAT CLOSE THE SALE

A locked-in chemical reserve is in every drop of Fulshine AP* (Alkali-Proof) Cleaner. This reserve prevents the freeing of harmful alkali.

Only safe Fulshine has this special-type reserve.

This major sales point, coup'd with the grand glowing sheen Fulshine leaves on the floor, has made it the favorite product of private label jobbers for over 25 years.



FULSHINE AP*
ALKALI-PROOF CLEANER

*Reg. U. S. Pat. Off.

MEMO TO: MELVIN FULD

The leaders in our industry, representing America's greatest chemical specialty producers, all honored you in Washington, D. C. by electing you president of the Chemical Specialties Manufacturers Association.

For over two decades, you have worked to help lift our once small association to a larger group embodying the most ethical manufacturers in the land.

I know you have been an inspiration to me since the day you founded Fuld Brothers in the roaring twenties. It is wonderful to see your efforts rewarded by the men who know your work best: The Chemical Specialties Industry.

Joe

Joseph Fuld

NOW IS THE TIME...

... to test samples of Fuld Quality Gym Seals and Finishes. Then you will know you are selling the best. Drop us a line for samples and prices.

We'll also tell you the best way to build a profitable seal and finish business.



Selling a product that gives you steady repeat business is like building a cash reserve.

And the safe chemical reserve in Fulshine AP* (Alkali-Proof) Cleaner is building stronger repeat sales every day. Fact is, it's been repeatedly earning commissions and profits for dealers and their salesmen ever since the day Fuld Brothers set the sanitary chemical industry on its ear with the revolutionary concept of alkali proof cleaning that leaves a fine polished glow on the floor.

Today, over 25 years later, records show thousands of salesmen, representing hundreds of private label jobbers, sell Fulshine in every state in the Union.

There are over 17 solid reasons why Fulshine is the cleaner to sell your customers. One of them is the safe chemical reserve you get in every ounce of Fulshine that prevents freeing of any harmful alkali.

WHAT ABOUT COMPETITION?

With so many cleaners on the market that leave floors looking dull, you and your prospect are in for a pleasant surprise when you demonstrate the brilliant performance and economy of Fulshine. Watch your prospects sit up and take notice of the pleasant glowing shine Fulshine leaves on the floor!

Sure, most of our customers sell other types of our cleaners as well as Fulshine. We make dozens of cleaners for just about every purpose and demand. That's our business.

But there is nothing on the market like Fulshine. It is the original and improved formulation with Glemite added for that extra eye appealing polished sheen.

We suggest you write us today for your copy of the booklet "Reasons Why Fulshine AP* Cleaner Excels." We'll send along a sample, too. Write Fuld Bros. Inc., 702 S. Wolfe St., Baltimore 31, Md.

Thanks for reading FBI News.

*Reg. U. S. Pat. Off.



"Avoid unforeseen problems—always specify Monsanto phosphates."

*Uniform, high quality phosphates
from the World's Largest Producer
of elemental phosphorus*



Serving Industry
... Which
Serves Mankind

*Inorganic Chemicals Division
Monsanto Chemical Company*

SOAP and Sanitary Chemicals

Volume XXX, No. 1

January, 1954

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For clear liquid shampoos...



EASIER FORMULATION... LOWER COST

with Du PONT *Duponol* EP
DETERGENT

This new detergent eliminates many of your shampoo formulation problems—makes formulation of clear liquid shampoos easier and production simpler than ever before. Here's why . . .

Less Thickening—Because "DUPONOL" EP is more viscous than other shampoo detergents—and more responsive to thickening agents—you use much smaller quantities of costly thickeners. This means easier and more economical formulation, greater detergent efficiency, better foaming properties, and lower cloud point.

Cleansing Power—"DUPONOL" EP gives your shampoo controlled cleansing efficiency that cleans hair thoroughly . . . yet its gentle action won't dry out the natural oils that are so essential to hair and scalp. And "DUPONOL" EP has excellent foaming characteristics, even in hardest water.

Color Stability—"DUPONOL" EP keeps its light color and low cloud point, unaffected by heat, light, storage, and shelf life—gives you a product that stays attractive.

Two-in-One Detergent—"DUPONOL" EP is the first detergent to formulate readily into both clear liquid and liquid cream shampoos. Now you don't have to stock two different detergents—you can make both types of shampoo from "DUPONOL" EP.

All this adds up to better shampoo at lower cost!

Du Pont has prepared dozens of shampoo formulations based on "DUPONOL" EP. For your copy of "DUPONOL" EP SHAMPOO FORMULATIONS," write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

DU PONT *Duponol* EP
REG. U. S. PAT. OFF.
DETERGENT



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Hy-Lux

—gives you unparalleled
FOOT SAFETY
plus the **HIGHEST**
GLOSS
yet attained in an
ANTI-SLIP WAX



—and no more scuffed floors!

Beautiful *high gloss* AND *anti-slip* floors—without smudge or scratch—yours for the first time when you buy and apply HY-LUX, the no-scuff bright drying wax . . . proving to thousands daily that now at last you can have luxuriously rich and mirror-like floors without sacrificing supreme foot safety.

Contains du Pont Ludox*, the proven anti-slip agent formu-

lated so that gloss is not diminished—added to a painstakingly researched Hysan formula that **CUTS REWAXING COSTS SHARPLY** because it withstands abusive heavy weather traffic and discoloration **NO MATTER WHERE APPLIED**—even in elevators and street entrances!

Now offered in solid content of 13%, 16% and 19%. **SEND FOR TEST SAMPLE.** You be the judge.

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VICTOR
Trisodium Phosphate

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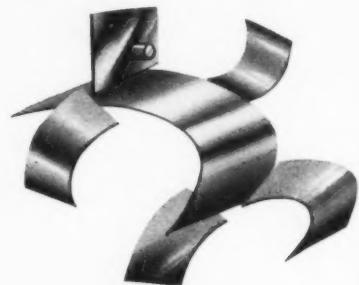
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WATER CONDITIONING

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METAL CLEANERS



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56 years of experience in the field of phosphates has made Victor more than a mere "source of supply." Victor customers get phosphates that are remarkably uniform, excellently packaged, promptly shipped and competitively priced, from single bags to bulk hoppers.

And there's still more! There's this matter of all the practical knowledge about soaps, scouring powders, water conditioning, detergent usage, etc. that Victor has developed through the years. Victor customers get that, too. If you haven't tried the combination of Victor products plus Victor service on *your* process or product problems, then you're in for a pleasant surprise. It's the combination that has led so many wise buyers to say . . . "It's better to buy Victor."

VICTOR
*Dependable Name in
Chemicals*
for 56 Years

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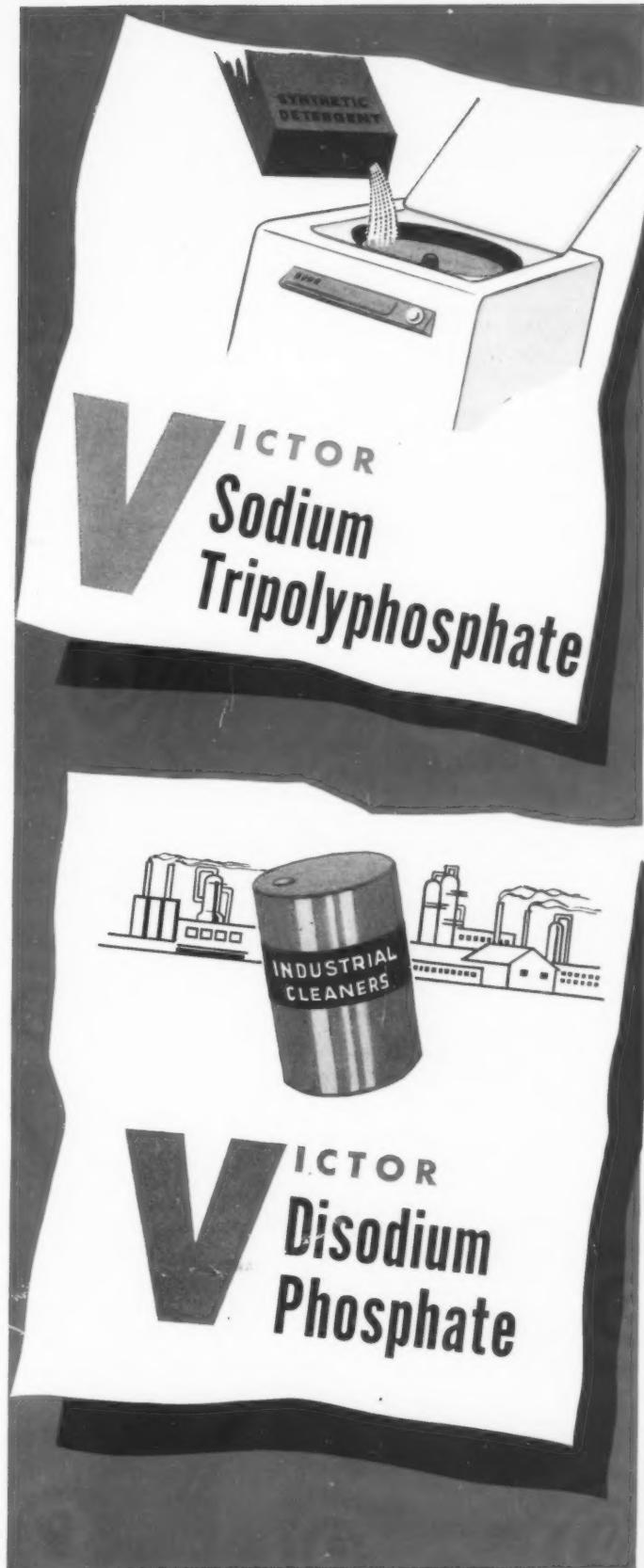
PHOSPHORUS CHLORIDES

ORGANOPHOSPHORUS COMPOUNDS

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FORMATES

OXALATES



A GUIDE TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE

SELF POLISHING WAXES

Candy's Supreme (standard)

Bright Beauty (standard)

Candy's Supreme Special WR

CAND-DOX #CS

CAND-DOX #BB

Seven floor waxes that are all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty FLOOR CLEANER

An outstanding material for removing even the heaviest wax film and dirt... Brings neglected floors "back to normal." The right cleaning agent to insure the most efficient floor maintenance.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits repeated repolishing with a dry cloth saving reapplication time and again; truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable), bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver without abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove...also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

• CANDY'S DISTRIBUTION AND SALES POLICY

Our products are available for private brand resale and are sold only through Distributors except for experimental accounts in Chicago essential to research.

An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic, but even more so on resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality means greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly as important as the quality of the solid content. When considering good quality, 12% of solids answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However, the more concentrated material is useful for some programs of maintenance and particularly on "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in our floor waxes. When refined and compounded with other important ingredients and "KNOW HOW," it aids materially in producing the most important features of a good floor wax...ALL AROUND QUALITY OF PERFORMANCE.

Wax Specialists for over 60 years
Candy & Company, Inc.
2515 W. 35th ST., CHICAGO

Maintain the quality and prestige of your soap,
perfume, and cosmetic odors—without excessive cost...

with

Aromatics by Albert Verley and Company, Inc.

Aldehyde C-12 MNA

Amyl Cinnamic Aldehyde

Benzyl Iso Eugenol Extra

Citronellyl Acetate • Citral • Cedrol

Eugenol • Geranyl Acetate

Geraniol Absolute • Geraniol Coeur

Geraniol for Soap (Water White) • Hydroxy Citronellal

Extra • Iso Jasmone Pure • Iso Jasmone for Soap

Linalool (Ex Bois De Rose Extra) • Linalyl Acetate 90-92% • Nerol

Pure • Rhodinol Laevo Citronellol • Terpineol

Pure • Terpinyl Acetate

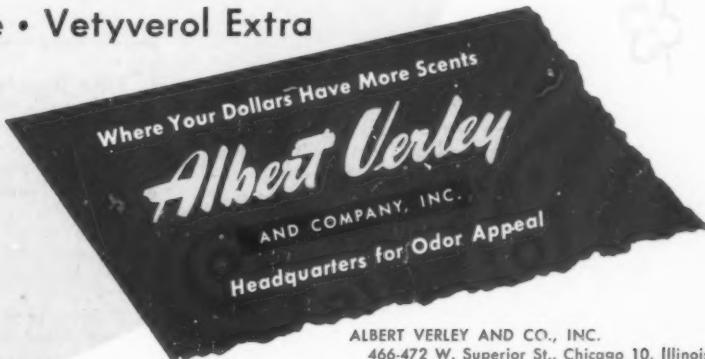
Tibetogene • Vetyverol Extra

Vetyvert

Acetate

Extra

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114-116 East 25th St., New York 10, N. Y.

MEFFORD CHEMICAL CO.
1026 Santa Fe Ave., Los Angeles 21, Calif.

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CASE
HISTORY

Another tough problem solved by an Emery Product

HOW EMERSOL[®] OLEIC ACID ELIMINATED ODOR AND COLOR OF FOAM RUBBER



No one likes to sleep with a clothespin on his nose. That's why it was important to avoid odor and yellowing of foam rubber. In this particular case it was easy. Replacing an ordinary double-distilled oleic acid with Emersol 233LL Elaine, eliminated odor due to rancidity. Likewise, the superior color stability of 233 gave the product maximum resistance to yellowing.

In addition, its low metal content resulted in highest service life, avoiding the acceleration of resinification of the rubber caused by minute traces of metallic impurities.

Whatever you make, foam rubber or an entirely unrelated product, the superior color stability, oxidation stability, and resistance to rancidity of all Emersol Oleic Acids can make your product better, stay better longer. The net result: your product will have consumer appeal... be easy to sell. And since they cost no more than competitive grades, next time... everytime... it will pay you to buy Emersol Elaines!

What Does Emersol Mean? Emersol, a contraction of the words "Emery" and "Solvent", describes Emery's exclusive process of solvent separation of fatty acids. Of more significance, however, is its meaning in terms of product performance. Because of this unique process, the use of automatic controls and of corrosion resistant metals throughout, Emersol Stearic and Oleic Acids are purer, more uniform, of "controlled" composition, and freer from metal contamination and other impurities that promote oxidation, rancidity and yellowing.

Because all these advantages carry over into your finished products, to you, Emersol actually means better products... products that stay better longer... products that are easier to sell.



Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

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Export: 5035 RCA Bldg., New York 20, New York
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Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles



NOW YOU CAN SELL TOP-QUALITY
FLOOR WAX AT A SOLID PROFIT BECAUSE

Our Research
has Licked the High
Carnauba Price

**NEW FORMULA JV-12 NO-RUBBING
SELF-POLISHING FLOOR WAX**

The problem: how to give your customers a no-rubbing, self-polishing floor wax with HIGH-CARNAUBA quality, but keep prices competitive.

Now, after years of research and development, ULTRA gives you the answer: FORMULA JV-12!

An entirely new formulation, FORMULA JV-12 meets all of your quality needs, but is priced to give you volume sales, bigger profits. At once, you gain rich, extra business and satisfy your customers' demands for the finest no-rubbing floor wax available in its field.



**ULTRA
CHEMICAL WORKS INC.**

Joliet, Ill.
Paterson, N. J.
Hawthorne, Calif.

WESTERN UNION

WIRE US COLLECT FOR =
FREE SAMPLE OF NEW =
FORMULA JV-12 NO-RUBBING =
FLOOR WAX =

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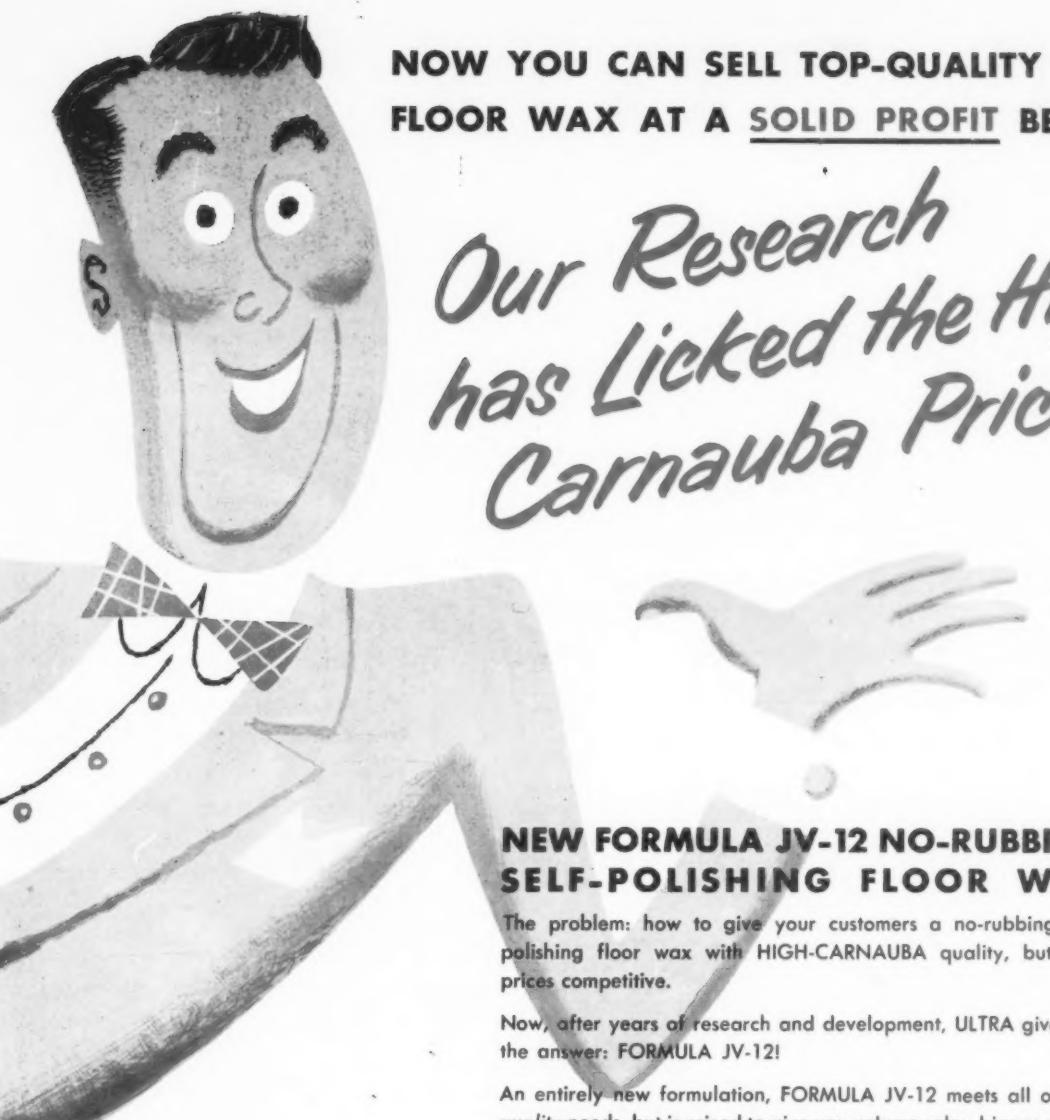
Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc., Carew Tower,

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Export: 5035 RCA Bldg., New York 20, New York
New York • Philadelphia • Lowell, Mass. • Chicago • San Francisco
Schibley & Ossmann, Inc., Cleveland • Ecclestone Chemical Co., Detroit

Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles



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FLOOR WAX AT A SOLID PROFIT BECAUSE**

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An entirely new formulation, FORMULA JV-12 meets all of your quality needs, but is priced to give you volume sales, bigger profits. At once, you gain rich, extra business and satisfy your customers' demands for the finest no-rubbing floor wax available in its field.

ULTRA
Chemical
WORKS

**ULTRA
CHEMICAL WORKS INC.**

Joliet, Ill.
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Hawthorne, Calif.

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WIRE US COLLECT FOR =
FREE SAMPLE OF NEW =
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FLOOR WAX =

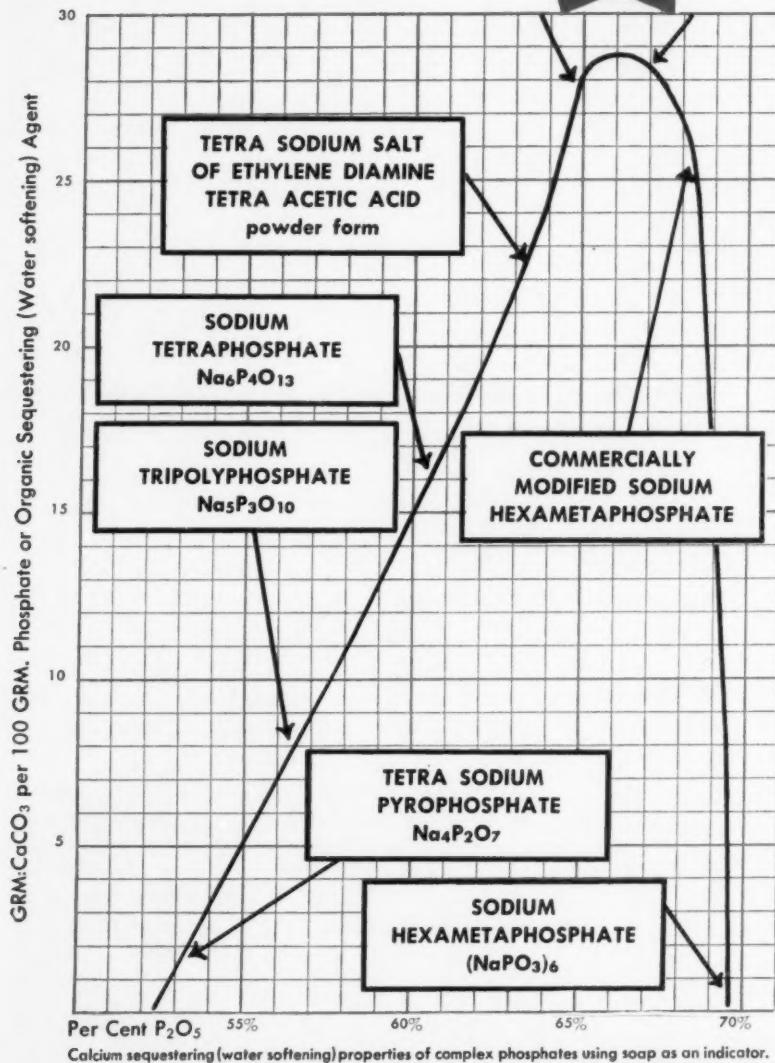
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*the amazing NEW
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Decontaminating radioactive surfaces



HY-PHOS . . . Highest sequestering (water softening) power of all known chemicals.

HY-PHOS . . . Highest dispersing power, wetting enhancement power, corrosion resistance power, nearest to neutral, . . . of all glassy phosphates.

HY-PHOS . . . Costs no more than other glassy phosphates.

5 FORMS . . . plates, pellets, regular grind, granular, fines.

Write...

for sample (state grind) and technical booklet describing properties, formulas and uses.

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No. 2,574,047

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a 26% active slurry form of IGEPO
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YOU CAN DO IT BETTER WITH AN IGEPO

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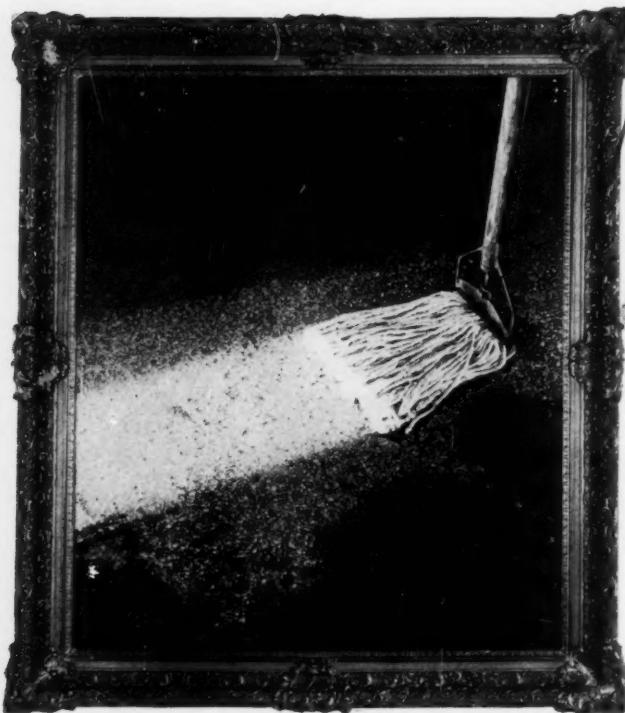
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old oil paintings makes
FLOORKEEPING NEWS!**



ALKATROL

**CONDITIONER-CLEANER
WITH AMAZING NEW**

Colordyne



**brings floors' color
back to life!**

Now! This famous conditioner-cleaner features a new chemical dynamic—*Colordyne*. To make floors look their beauty-best, this conditioner-cleaner removes encrusted soil and dulling soap films effortlessly—allowing *Colordyne* to freshen the floors' original vivid color. Try it yourself and see how *Colordyne* magically enhances colors in your floor.



Listed by Underwriters' Laboratories, Inc.
as anti-slip floor treatment material.

Colordyne now added to ALKATROL, ALKATROL with CHLOROPHYLL, and ALKATROL-3 DISINFECTANT Conditioner-Cleaner

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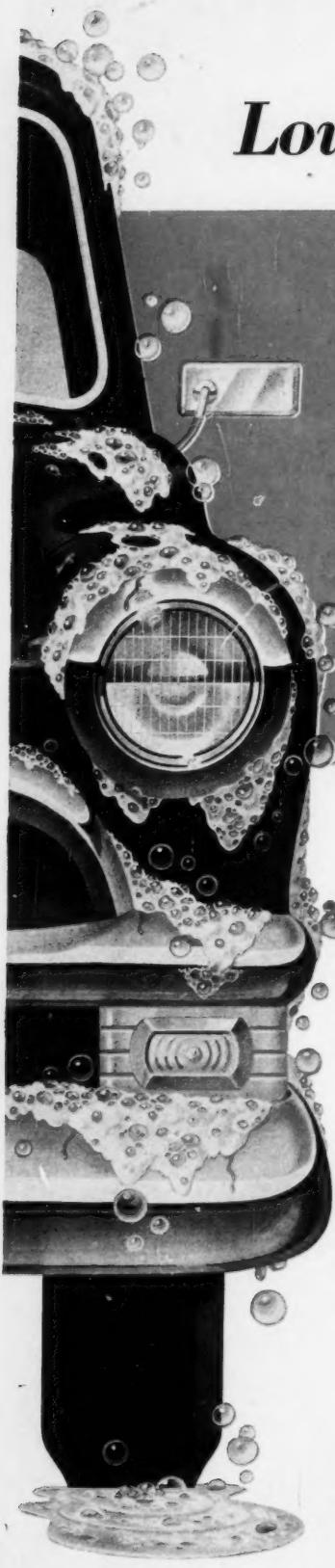


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Low Density

D-40 SF



D-40 SF Showing bulk density of Oronite's D-40 SF alkyl aryl sulfonate in flake form.



BRAND X Showing bulk density of a typical competitive alkyl aryl sulfonate.

Your best buy for "Car-Wash" repackaging

When you buy by weight and sell by volume, D-40 SF will increase your profit on repackaged car-washing products. Because of D-40 SF's low density it doesn't require as much product to fill your standard packages.

You will find a further advantage in being able to repackage D-40 SF "as is" or with a minimum amount of compounding.

D-40 SF is quickly soluble in hard or soft water, either hot or cold. It is free flowing, provides maximum amount of foam and maintains foam

stability in presence of grease. Being neutral, D-40 SF will not harm painted surfaces.

Packaged in easy-to-handle 70 lb. bags, D-40 SF is made by Oronite, the world's largest producer of synthetic detergent raw materials. The Oronite name is your assurance of a stable, economical source of supply.

Why not compare D-40 SF with the product you are now using for repackaging? Just contact the Oronite office nearest you for samples and complete information.

*"The world's largest producer
of synthetic detergent
raw materials"*

ORONITE CHEMICAL COMPANY

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30 Rockefeller Plaza, New York 20, New York
600 South Michigan Avenue, Chicago 5, Illinois
Standard Oil Building, Los Angeles 15, California
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2880

SOAP and SANITARY CHEMICALS



After Closing . . .

Preston Heller Dies

Preston B. Heller, president of B. Heller & Co., Chicago, manufacturers of insecticides and other



PRESTON B. HELLER

chemical specialties, died in his 53rd year on January 6 at the Chicago Memorial Hospital after a short illness. Mr. Heller was the son of Benjamin Heller who founded the company. He was a colonel in the Chemical Warfare Service attached to the general staff during World War II and was a holder of the Legion of Merit. For many years, he was active in the Chemical Warfare Reserve. He was a former member of the board of governors of the Chemical Specialties Manufacturers Association. His wife, Mrs. Ruth Heller, two sisters and two children survive, Preston B. Heller, Jr. and Mrs. Edith Heller Juda of St. Joseph, Mo.

Detergents Inc. Integrated

Detergents, Inc., Columbus, O., which for the past nine months has been operating under its own original name as a wholly owned subsidiary of Monsanto Chemical Co., St. Louis, has been absorbed into the parent company, effective January 1, 1954.

The organization continues to operate in Columbus as the packaging plant for the merchandizing

division of Monsanto, with the same personnel as in the past, according to a recent announcement by J. L. Ranney, plant manager.

Fels on Color TV

Fels & Co., Philadelphia, had the honor Dec. 18 of being the first local advertiser to sponsor a color television commercial. Color slides for "Fels" were used over Station WPTZ.

The station became the first in the nation to sponsor a local color television program following the Federal Communications Commission's approval of compatible color television.

The color slides for Fels had been in preparation for about two months before the viewing. The commercials were used on "Skinner's Spotlight." Color TV experiments have been conducted regularly at WPTZ for the past two and a half years, but Fels & Co. became the first company to use it commercially.

Z. D. Sappenfield Dies

Z. Dale Sappenfield died in Chicago on December 2. Mr. Sappenfield was a former purchasing agent for Allen B. Wrisley Co., Chicago.

ASTM Committees to Meet

Committee D-12 on Soaps and Other Detergents of the American Society for Testing Materials is scheduled to meet at the Park Sheraton Hotel, New York, March 15 and 16. Committee D-21 on Wax Polishes and Related Material will meet during the society's 1954 committee week, at the Shoreham Hotel, Washington, D. C., February 1 through 5.

Flanagan Sales Head

The appointment of George J. Flanagan as sales manager of Federal Varnish Division of Enter-

prise Paint Mfg. Co., Chicago, was announced this month by John H. Lawson, president. Mr. Flanagan joined Federal Varnish Division in 1946, and has served in a sales capacity since. He is also currently serving as central regional vice-president of the National Sanitary Supply Association. In addition to his duties as sales manager, Mr.



GEORGE J. FLANAGAN

Flanagan continues to remain active in territorial sales work.

FMC Forms Two Divisions

Effective January 1, 1954, Westvaco Chemical Division, Food Machinery and Chemical Corp., New York, was reorganized into two separate operating divisions to be known respectively as Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., and Westvaco Mineral Products Division, Food Machinery and Chemical Corp., Paul L. Davies, president, announced recently.

Westvaco Mineral Products Division is responsible for products manufactured at Carteret, N. J., Lawrence and Sunflower, Kansas, Modesto and Newark, Calif., and Pocatello, Idaho, plants which include phosphorus, phosphates, barium chemicals and magnesium chemicals. W. N. Williams, Westvaco's operating vice president, is president of this new division.

Westvaco Chlor-Alkali Division is responsible for products manufactured at the Charleston, West Virginia, and Green River,

Wyoming plants, which include chlorine, caustic soda, soda ash, chlorinated chemicals and carbon bisulphide. Franklin Farley of the administrative staff, FMC Chemical Division and previously a vice president of the International Minerals and Chemical Corp., is president of this division.

Both Mr. Farley and Mr. Williams report directly to Ernest Hart, executive vice president, Chemical Divisions, Food Machinery and Chemical Corp. Sales and service groups as now constituted will continue contacts with customers on all products.

— ★ —

FTC Drops Charges

Complaints charging the "Big Three" soap companies with unlawful discrimination in prices and in granting promotional allowances were dismissed January 3 by an unanimous decision of the Federal Trade Commission. The commission ruled that evidence failed to support charges that the advertising allowances offered by Procter & Gamble Co., Cincinnati; Lever Brothers Co., New York; and Colgate-Palmolive Co. (formerly Colgate-Palmolive-Peet Co.) Jersey City, N. J.; were in direct violation of the Clayton Act, section 2 (d), which requires that advertising and promotional services be made "available on proportionately equal terms" to all competing customers.

The opinion prepared by Commissioner John W. Gwynne noted that the law does not require that a comprehensive promotional plan "must be so tailored that every feature of it will be usable or suitable for every customer" but points out that the law does not sanction promotional plans "tailored to fit the needs of favored customers." The opinion stated that, although no standards are laid down in the law for accomplishing proportionality, it is clear that Congress was acting to outlaw the use of payments for services and facilities rendered "for the purpose of discriminating among customers." Every plan providing payments for promotion-



FRANKLIN FARLEY



W. N. WILLIAMS

al services and facilities, Mr. Gwynne said, "must be honest in its purpose and fair and reasonable in its application."

Payments by the soap companies covering different types of services for which a different scale of payment was fixed were made in good faith and available to all customers, Mr. Gwynne held.

Orbis Moves Office

Orbis Products Corp. recently moved their general offices to 601 W. 26th St., New York 1, N. Y. The new telephone number is WAtkins 4-7660. The offices were formerly located for many years at 215 Pearl St., where warehousing and shipping facilities are being continued.

New Bon Ami Chairman

Richard S. Childs was elected chairman of the board of Bon Ami Co., New York, at a meeting of the board Jan. 5, to succeed the late Eversley Childs, who died Dec. 20. The new Bon Ami chairman has been a director since 1911, at which time he was general manager. Subsequently, he was in the export business and was an executive of American Cyanamid Co. from 1928 to 1947. He is now chairman of the National Municipal League.

Henry A. Childs, a grandson of Eversley Childs, was elected a member of the board of directors and Lester G. Clark was elected to the executive committee.

Karl Voss Dies

Karl Voss, founder and president of Karl Voss Corp., Hoboken, N. J., manufacturers of paper boxes for toiletries and cosmetics, died Jan. 1 in Roosevelt Hospital, New York, after a long illness. He had served as chairman of the convention committee of the Toilet Goods Assn. Mr. Voss, who was a member of the New York Athletic Assn., made his home in Franklin Lakes, N. J. He is survived by his widow; a son, Donald H.; a brother, Richard, and two married sisters.

Kiehl Joins Little

John F. Kiehl recently joined Arthur D. Little, Inc., Cambridge, Mass. industrial and research firm, as a consultant on perfume, flavor and odor. He is doing cooperative work with the flavor laboratory on problems concerning the application of perfume or flavor blends to finished products, with particular emphasis upon the development of new and distinctive compounds.

Mr. Kiehl, who has had experience in the perfume and flavor fields dating from 1923, maintains, in Willsboro, N.Y., a fully equipped laboratory. From 1942 until recently, Mr. Kiehl was division head in charge of all perfume and flavor work for Colgate - Palmolive - Peet Co., Jersey City, N. J., and from 1934-1942 he worked on new perfumes and flavor for Colgate and its foreign subsidiaries.

S. C. Pesticide Law

The new South Carolina Economics Poison Law, which went into effect Jan. 1, 1954, features a \$5 per brand registration fee and an optional labeling clause. The section of the bill dealing with the power of attorney was the subject of a conference between C.S.M.A. general counsel John D. Conner and representatives of the state. As a result, it has been agreed that execution of power of attorney under the new law will not be required as a condition of registration. The form must be filed only by companies which actually make sales of pesticides in South Carolina. Also, a power of attorney form submitted by Mr. Conner is acceptable to the Commissioner of Agriculture as meeting the requirements of the law.

— ★ — Polak Founder Retires

The retirement of Jacques Polak, president of Polak's Frutal Works, Inc., Middletown, N. Y., was announced recently. Mr. Polak, whose retirement became effective Jan. 1, is one of the founders of the company, and has been associated with the essential oil industry for more than half a century. His elder son, Frits J. Polak, becomes president. Other officers of the firm include: Bernard Polak, vice-president; Alexander H. Micheels, assistant vice-president; John ter Veer, secretary; Erik Vles, treasurer, and Ernest Polak, director of research.

JAC. POLAK



Founded some 40 years ago by Jacques Polak and his brother, Henri, as Polak's Frutal Works, N. V. in Amersfoort, Holland, the firm later established branches in other European countries and built a second plant in Perivale, near London in England. The American company was incorporated in 1921. In 1937 a manufacturing plant was acquired in Long Island City. Having outgrown its facilities the firm moved in 1946 to Middletown, N. Y., where the main headquarters for the world-wide operations of the firm were established. Polak's Frutal Works maintains a branch office in Chicago.

— ★ — Paint Aerosol Labels

The following regulations governing the labeling of paint or enamels in pressurized packages were recently promulgated by the New York City Fire Department and are now in effect:

1. Each can or container containing paint or enamel under pressure shall be labelled.
2. The label shall bear the name and address of the manufacturer or his agent, the Fire Department permit number or the Certificate of Approval number.
3. All pressurized containers used for paint or enamel shall each be labelled "CAUTION — KEEP FROM FLAME." These words shall be prominently placed on the front portion of the label or directly above the directions for use, in bold-faced capitals not less than twelve point type size.
4. Labels shall be submitted to the Fire Commissioner for approval.

FRITS POLAK



Sues over "Hard Gloss"

S. C. Johnson & Son, Inc., Racine, Wis., recently filed suit in the United States District Court for the District of Maryland against John C. Stalfort & Sons, Inc., Baltimore, over the use of words "Hard Gloss" to identify a liquid floor polish. Johnson is owner of the trade mark "Hard Gloss" for liquid floor polish, which was granted June 16, 1953. Johnson claims that Stalfort used the trade mark "Hard Gloss" on liquid floor polish.

The mark as used by the defendant is a "reproduction, counterfeit, copy or colorable imitation of the plaintiff's registered trade mark," according to the Johnson complaint. It is used in the sale and advertising of products which causes confusion and deceives purchasers, Johnson further contends. For this reason Johnson asked that Stalfort be enjoined from using the mark, and that any labels, signs, prints, packages, wrappers, receptacles, advertising, etc., bearing the "Hard Gloss" trade mark be destroyed. Johnson also seeks to recover defendant's profits, and to have the defendant assessed treble the amount of damages suffered.

— ★ — Continental Strike Over

Settlement of the 36 day strike against Continental Can Co., New York, was effected Jan. 5. The company has agreed to an increase of 8½ cents in the basic hourly wage rates, retroactive to Oct. 1, according to a joint announcement by Gen. Lucius Clay, Continental chairman and David J. McDonald, union president.

The strike against American Can Co., New York, which was also in its second month, was settled January 12.

In addition to the wage increase, another three cents an hour will be paid, beginning Feb. 1 to reduce existing wage differentials applying to women and among plants in different areas. The company and the union have agreed to a new contract for a two-year period, with the contract to expire Oct.

1, 1955 and wage negotiations to be reopened Oct. 1, 1954. The company has also agreed to expend, beginning Oct. 1, 1954, a sum equivalent to two cents an hour in the further reduction of wage differentials and in reducing existing job inequities.

The company will also cooperate with the union in a job evaluation program. The contract provides that if any of the six specified holidays in the contract fall on Saturday, Saturday will be considered a work day.

— ★ —

Samuel Newman Honored

Creco Co., Long Island City, N. Y., gave a luncheon on January 9 at the Astor Hotel in honor of Samuel Newman, who has completed 25 years with the company. The entire staff attended the affair. Mr. Newman is executive vice president of Creco and recently finished a two year term of office as eastern regional vice president of National Sanitary Supply Assn.

— ★ —

New Westvaco Status

Westvaco Chemical Division, New York, announced early this month that it will act as sales agent for the two newly-formed operating divisions of Food Machinery and Chemical Corp.: Westvaco Chlor-Alkali Division and Westvaco Mineral Products Division. Donald C. Oskin, previously assistant manager of sales for Westvaco Chemical Division has been appointed manager of sales.

DONALD C. OSKIN



After 47 years . . .

Imagine starting the golf year with a hole in one! This is exactly what Wally Bush, vice-president and sales manager of Ungerer & Co., New York, did on Jan. 3, 1954. Playing the 135 yard third hole at the Essex Fells Country Club in northern New Jersey,—in the dead of winter, mind you,—Wally put his No. 6 iron tee shot in the cup,—kerplunk! Now, let it be said that Wally is no mean golfer, an 80 shooter, but it took him 47 years of golf playing to make his first hole in one. (He claims he started playing at age four.) We wonder how much the ensuing celebration in the Essex Fells locker room cost him.—Ed.

Bardahl in Auto Chemicals

Bardahl Oil Co., St. Louis, plans to enter the automotive chemical specialty field and in the near future will establish a department to manufacture polishes, radiator chemicals, brake fluids, cleaners and other automotive chemical products. The company produces lubricating oils and greases. Frank A. Gerardot will direct the affairs of the new division. The company is located at 5635 Natural Bridge, St. Louis, 20, Mo.

— ★ —

NSSA Meets Mar. 21-24

Program details for the 31st annual convention and trade show of the National Sanitary Supply Association, to be held at the Conrad Hilton Hotel, Chicago, will be announced shortly, Leo J. Kelly, executive vice-president, said recently. The show, which will be held Sunday through Wednesday, March 21-24, promises to be the largest and best attended show in the history of the organization, according to Mr. Kelly.

More exhibit space, which will permit increasing the number of display booths from 176 to 196, is being made available as a result of the Conrad Hilton Hotel's elimination of its coffee shop on the lower lobby level adjacent to the exhibit hall. The drawing for ex-

hibit space was conducted late last fall by the convention exhibit committee. Some 32 manufacturers were present for the drawing of names and assignment of display space.

— ★ —

Can. Ag. Chemists to Meet

The first annual meeting and conference of the recently incorporated Canadian Agricultural Chemicals Association will be held at the Royal York Hotel, Toronto, February 19, 1954. In addition to members of the association, anyone interested in this event either from Canada or the United States will be welcome and should communicate with M. F. Anderson, secretary, Canadian Agricultural Chemicals Association, P. O. Box 130, Montreal, Que., Canada.

— ★ —

Heads Neville

Election of Lee V. Dauler as president and D. W. Kelso as vice president, was announced by Neville Chemical Co., Pittsburgh manufacturers of synthetic resins and solvents, January 1. Mr. Dauler formerly was vice president. Mr. Kelso retains his post of treasurer.

Edwin Hodge, Jr., formerly chairman of the board and president, continues as chairman and John C. Bane, Jr., continues as secretary and assistant treasurer.

W. F. Eberle and R. E. Dingleberg were elected assistant secretary and assistant treasurer respectively.

LEE V. DAULER



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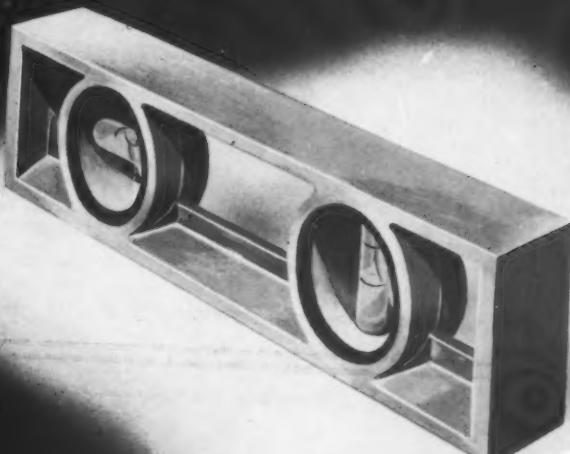
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JANUARY, 1954



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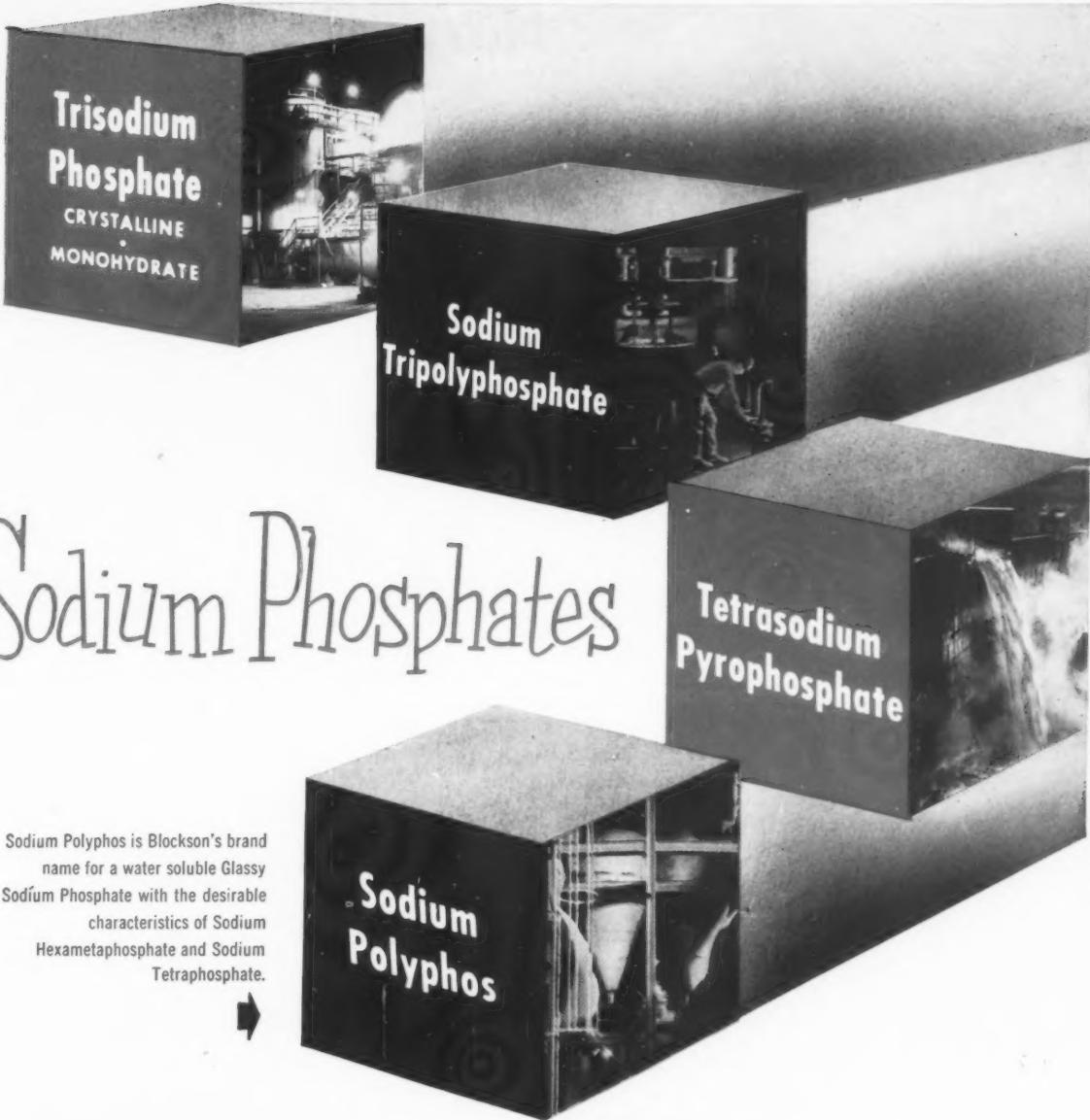


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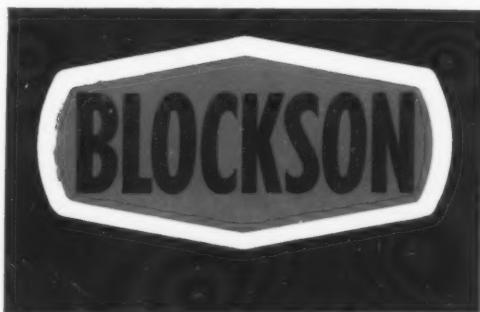
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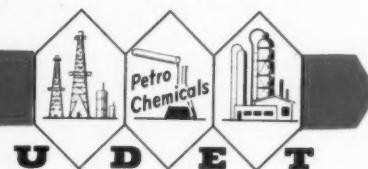
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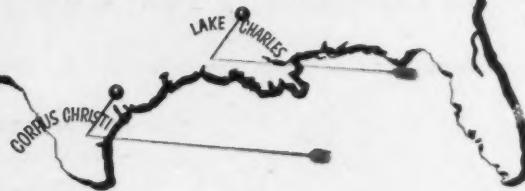
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JANUARY, 1954

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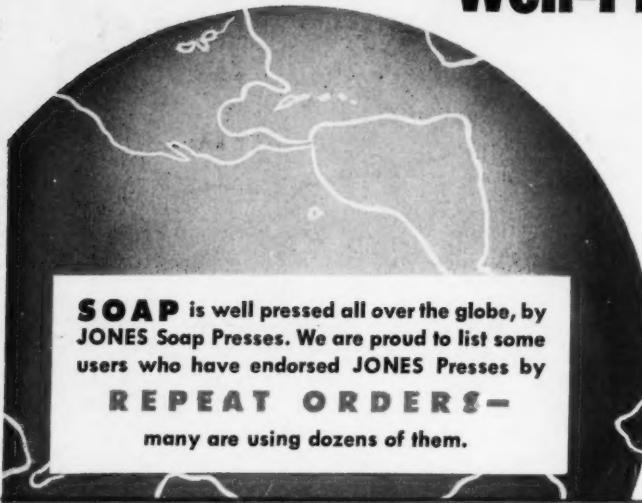
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... in brief

 OUTLOOK . . . We're in for a business decline in 1954, so a few economists hint in their customary double-talk. Could be. Really, we don't know. But we do know that for some companies, 1953 represented considerable of a decline compared to previous years. Business in a lot of spots in and around the detergent, soap and sanitary chemicals field was nothing to write home about. And then, so-and-so would tell us that he was having a wonderful year, the best in his history. In one group of competitors, we heard that everybody had taken it on the chin in 1953. Then up pops one firm whose head man admitted that their 1953 business was up over twenty per cent.

In an economy as broad and as complex as ours, we doubt that any uniform pattern can be sketched in advance for 1954 which will apply to all business. Like our economists, we too can predict that the demand for buggy whips will not be overwhelming. We believe that competition will be keener, prices slightly lower. But for those who go after business, we have a hunch that it will still be there, just like it was last year and the year before.

•

 TALLOW CHIP . . . Belatedly perhaps, some producers have advanced the price of 88 per cent tallow chip soap. The advance is a stiff one, $1\frac{1}{4}$ cents per pound. This brings the price of this standard bulk soap in line with the current tallow market and present-day manufacturing costs. Based on what we hear, other soapers will be bound to follow suit or continue to lose money on this highly competitive commodity. The new price is $9\frac{1}{4}$

cents for chips based on a $7\frac{1}{4}$ cent tallow market.

The significant feature of this price advance is the establishment of a two-cent spread between tallow and chip soap. For many years, tallow and chips were quoted at the same price, the profit being glycerine. But times have changed. Either soapers of yesteryear had much lower overheads or they didn't know their costs too accurately. Today, most soapers know how overhead costs have skyrocketed and they appear determined to adjust soap prices accordingly. Actually, the price of chip soap has been out of line, especially with overhead costs, for several years, apparently held there by competition and the threat of other products.

As we see this chip soap price advance, it is in effect an ultimatum by some soapers. Either, they sell chip soap at a profit, or they're not going to sell chip soap—period!

•

 DILEMMA . . . Off hand, it seems fitting that a gentlemen from Texas should win an oil well in a soap jingle contest. If he had lived in Maine or Oregon, he would not be right handy to watch his lucky well spout its black gold into his bank account. But, so far, we haven't heard whether the winner has chosen "a producing oil well" or \$25,000 in cash for writing the best couplet on why he likes "Dial Soap." As a native of Texas, however, even though the employee of a life insurance company, we feel that morally he has little choice. Is there a Texan who would turn his back on a real oil well just for money?

That the winner is on the horns of a dilemma and Armour's "Dial" in the news pages of every newspaper in the land, there is no doubt. Like most contest winners, this gentle-

men says that first, there comes the mortgage on his house, and second, there's a new car. Then college for the kids. We beg to correct him. First, second and third, come Uncle Sam's tax collectors. Whether he or Armour takes the tax rap, old Uncle will be first in line with his hand out. Then come mortgages, new cars, etc.

Frankly, this fellow has our nerves on edge. We wish he would make up his mind. Armour and "Dial," however, are probably not at all unhappy about the winner's indecision. On his dilemma, hangs about the best chunk of free soap advertising we have viewed in some time.

 **AEROSOLS . . .** That aerosol sales reached an estimated 130 million units in 1953 occasioned little surprise. This compared to some 100 million in 1952 and 43 million in 1951. Most everybody in and around the chemical specialties field felt that with the advent of many new products and steadily increasing sale of older (*sic*) items, a new pressurized-package record was a certainty. The Du Pont annual aerosol market survey for 1953 confirmed this belief.

Anyone who viewed the exhibit of some 400 different pressurized packages at the meeting of the Chemical Specialties Manufacturers Association last month in Washington must have been impressed by the great progress of the industry. The exhibit epitomized the reasons why 80 per cent of American homes used some aerosol products in 1953. To date, some 45 different type of products are sold in pressurized packages. A dozen or so new types may make their market debut in 1954. Between the lines, we read that the surface of this aerosol market hardly has been scratched.

 **WASHING HABITS . . .** The advent of clothes and dish washing machines in many thousands of American homes over the past few years has changed and is changing public thinking about detergents. Clothes washing either at home or in the commercial laundry in the good old days was based on soap and alkalies and the machines were designed to handle these detergents, not forgetting suds.

As far as we can see, the washing machine

people are going right along their merry way, ignoring most of the soaps and detergents commonly sold for home use. All efforts seem to be bent toward producing better and lower-cost washing equipment without caring a hoot for its effect on present nationally advertised detergents and soaps. Let the soap boys adjust their products to this new household machine age—or somebody else will. This seems to be their reasoning.

Well, if this be an implied warning to soapers, let us say that they foresaw it themselves a decade ago. Already revolutionary changes have been many. If they must make further and more drastic changes to keep their market, they will do just that. For no matter what Mrs. McGuff uses to wash the old man's work pants, be it in a wooden tub or a chrome-trimmed whirligig, the soap industry intends to keep selling it to her. If they must adjust to do it, adjust they will,—and mark that in your little black book!

 **COCONUT OIL . . .** Once again in the current session of Congress, a concerted attempt will be made to remove the three-cent processing tax on coconut oil. H.R. 6292 aims to amend the Internal Revenue Law by crossing Philippine coconut oil off the taxable list. To remove the tax in 1954, the twentieth anniversary of its imposition, would be quite fitting. However, we hold little hope that it will be accomplished. Law makers, and especially ways and means legislators, constantly seeking new revenue, seldom let go of old. Numerous strong and well-organized movements in the past to kill this tax have failed.

Because this levy has stayed on the statute books for twenty years does not mean that it is, or ever was, a fair and equitable tax. Its alleged protection of the American farmer, stockman or renderer against the threat of cheap, "slave-produced" coconut oil is unadulterated claptrap. The tax has hurt the rendering industry. It has hurt us in the Philippines and continues to be discrimination against the Philippines. It has hurt the small American soaper and continues to do so. But in spite of its obvious discriminatory nature, we doubt that it will be removed at this session of Congress, or the next.

as the reader sees it

Buyer Not Fired

Editor

In the "Tale Ends" column of the November issue of *Soap and Sanitary Chemicals* you published an item about our company which we feel is quite inaccurate. Here are the actual and accurate facts:

1.) The buyer was not "fired." He resigned of his own choice, for personal reasons but definitely in no way connected with the chemical show.

2.) The chemical promotion did exceptionally well.

3.) The stock on hand was not too great.

4.) The buyer and John Wanamaker pioneered the "Chemical Carnival" idea, and fared better with it than other stores that followed up on the idea.

Fred Schmertz,
Legal Office
John Wanamaker, Inc.
New York

We are sorry for any embarrassment suffered by the store or its buyer by our "Tale Ends" comment. It was based on a report

given to us by what we believed was an accurate and trustworthy source, and published on that basis. Ed.

Wants More Detergent Data

Editor:

I read with great interest the article "Evaluation of Sea Water Detergents," on page 42 of the December issue of *Soap & Sanitary Chemicals*, hoping to gain some useful information.

Unfortunately, for myself and I would suggest also for the majority of your readers, the really vital details are omitted, i.e., the composition of the detergents actually used. Of course, we are told the basic material, but of what use is this without any guide to build up (builders?). For instance, detergents E and F are identical in description, yet poles apart in their usefulness under test; surely an investigation such as this to be of real service should include such detailed information, not, I make haste to add, any disclosure of formulae of marketed products.

In fact, I suggest it would

have served a far more useful purpose, had these tests been carried out with the experimenter's own formula, naming the proportions of active detergent and builders used. From such data your readers generally could have gained as much information as the eight industrial suppliers have of the relationship of their own product to others under test.

Albert H. Dodd, works manag

Albert H. Dodd,

works manager

H. Russell Soap and Dis-

infectants, Ltd.

Liverpool, England

P.S. I have read and appreciated *Soap* for the last 20 years. May I wish all concerned with same, the best of luck in 1954.

The article in question, Part II of which appears in this issue, was dealing mainly with methods of evaluation of sea water detergents, rather than with products themselves. However, since many of those tested are proprietary products, obviously their formulas could not be revealed. Ed.

Sims C-P Exec.-V.P.

In reporting the executive changes at Colgate-Palmolive Co., Jersey City, N. J., in our December issue, we inadvertently stated that Hugh Jewett, comptroller and secretary, was executive vice-president of the company. Mr. Jewett is vice-president and W. L. Sims, II, president of Colgate-Palmolive International, is the only executive vice-president of the firm. He was named to this post early in 1953.

Chem. Show in Phila.

The 24th Exposition of Chemical Industries was held last month in the Commercial Museum and Convention Hall, Philadelphia, where its 550 displays were spread over five level acres. The show lasted one week and drew an estimated attendance of 32,300 visitors. Exhibits included minerals offered for the first time in newly refined forms, structural materials in new fabrications more resistant to temperatures, pressures, erosion, etc.





DANIEL H. TERRY

A GREAT many changes have taken place in the soap industry and also in our cleaning habits in the past forty years. The soap industry is one of the oldest in America and has been, and continues to be, a very important economic factor. In all probability most of the larger soap companies of today can trace their history back many years before 1913, when soap making was done mainly by many small companies. In 1913 there were approximately four hundred companies making soap.

During the past forty years this number has reduced steadily to the point where there are roughly only two hundred and fifty companies now engaged in soap making. Therefore, at present there are about half as many companies making three times as much soap as in 1913. This period has been one of amalgamation and growth of a small number of companies to sizeable proportions. This trend has been world-wide.

Changes in Soap

AS has been the case with many other things, soap products have also changed during this period. Illustrations of these changes that are most worthwhile mentioning are:

1. Toilet soap has shown steady growth from approximately 165 million pounds in 1913 to

(*Paper presented at the fortieth annual meeting of the Chemical Specialties Manufacturers' Association at the Mayflower Hotel, Washington, D. C., Dec. 8, 1953.)

40 years of

SOAP INDUSTRY

almost 600 million pounds today.

2. Granulated soap was first introduced in 1925 and had very rapid growth from a reported 142 million pounds in 1925 to a peak of 1.5 billion pounds in 1947. Since then, it has been declining steadily to a point where only slightly more than 700 million pounds of granulated soap were reported made in 1952.
3. A gradual falling off of chip soap usage.
4. Bar soaps have been produced for many years. However, the introduction of granulated soap effected a steady reduction in bar soap usage, especially laundry bars. On the other hand, the usage of toilet bars and white laundry bars increased slightly to maintain an almost level production position for this type of soap.
5. In 1949 a milled bar of soap containing a stated germicide was introduced. The claim that if used exclusively and daily, it would reduce body odor was permitted by the Food and Drug Administration with the result that in the past few years a number of other milled bars containing this germicide were introduced with a steady increase in their use. Since then many other deodorant soaps in different physical forms have been marketed with varying degrees of success.

Improvements in Soap

DURING the past forty years improvements have been obtained in soap products by the addition of a number of chemical

auxiliaries. For some time, unknown to the public, soaps have contained a number of miscellaneous ingredients, such as, tin compounds and silicates in very small quantities. Within the past few years the incorporation of less than 0.1 percent of a colorless chemical to household soaps imparted brightness as well as whiteness to the washed fabric. These colorless chemicals are substantive to cotton and are known as optical brighteners or whitening agents. The use of these materials has the effect of bluing without the actual presence of a colored dye. They function by absorbing ultra-violet rays and emitting them as blue light. They are much more effective in daylight than in artificial light.

One of the most important of the developments in the use of chemical auxiliaries has been the introduction of the complex phosphates, which goes back about fifteen years. Of these complex phosphates, tetrasodium pyrophosphate came first. Next and more recent is sodium tripolyphosphate. The complex phosphates contributed considerably to the rapid growth of granulated detergents. The use of complex phosphates was almost eliminated during World War II. However, in 1949 increased production capacity made them freely available, so that manufacturers could formulate products calling for phosphates without restriction.

Other recent additions to improved soap formulas are carboxy methyl cellulose, methyl cellulose and more recently methyl cellulose sulphate. Contributors from the organic chemicals industry are the many different organic amines which have made the soluble sham-

PROGRESS

By Daniel H. Terry*

director of research,
Bon Ami Co.

poo soaps possible. The perfume industry has made many of the products more appealing to the housewife by developing many excellent synthetic aromatics that are within the economical price range. Many other chemical additives could be mentioned, such as foam stabilizers, hypertropes, etc. that have been developed within the past forty years. These and others have aided considerably in the improvement of soap products.

Technical Progress

TECHNICAL progress since 1913 has been considerable and may be classified as follows:

1. Developments through invention.
2. Developments in equipment, in design, in methods and in controls.

The classification of the most important developments in the soap industry through invention is a matter of opinion. Chronologically such developments are as follows:

	approximate date of use
a. Hydrogenation	1910
b. Spray drying	1925
c. Continuous soap processes	1940

The hydrogenation process was developed shortly before 1900, but was not utilized to any great extent in America until around 1913. This process had a definite effect on raw material available for soap-making until 1940.

The development of spray drying of soaps is rated very high in importance in the technical progress of soap products. It not only provided an economic procedure for removing water, but it also was a means of putting soap in a free-flowing, readily soluble form and

comparatively free of dust. It is the opinion of many that the rapid growth of granulated soap powders and later synthetics may be attributed mainly to the development of spray drying.

The importance of the introduction of continuous soap manufacture can probably be ranked first as a technical development within the industry. Each of the three major soap producers now operates one or more such processes. The end product from either the batch or continuous process is indistinguishable by the consumer.

The development of equipment and design, methods and controls is believed to be the most important of the technical developments. Without such improvements, progress would be at a standstill. These are represented by the use of stainless steel for sulfonations, by the use of activated charcoal for bleaching, and by the use of pH recorders for caustic treatment.

In the years immediately following World War II, annual soap production remained at a fairly constant level of slightly over three billion pounds. After a short drop in 1948, a sudden break in raw materials prices took place in 1949. This resulted in an immediate increase in the production of soap, which rose 10 per cent in 1949 over that of 1948.

Since then, according to figures obtained from the Association of American Soap and Glycerine Producers, soap production* has slowly decreased to 2.2 billion pounds in 1952. This decrease was also reflected in the reported figures for the first six months of 1953 which showed approximately 810 million pounds or a 17 percent drop

from the first half of 1952.

Of this 2.2 billion pounds of soap produced in 1952, 85 percent was sold as household package goods. The remaining 15 per cent was marketed for industrial purposes of which 46 percent was used by laundries, 19 percent by the textile industry, seven percent in synthetic rubber and the other 28 percent for miscellaneous and maintenance purposes.

Marketing Changes

IN addition to the above changes and progress there has been a revolution in marketing of household soaps in the last 40 years. Previously, almost all sales for the household field were made through wholesale channels, from wholesalers to retailers to consumers. This picture has changed drastically through the growth of chain stores and the development of co-operative purchasing groups serving retail stores. Merchandising, advertising media and sales promotion are intensely competitive and aggressive. Sampling, couponing, one-cent sales, combination sales, contests and premiums are all used to promote sales by brand name.

New Soap Uses

THE uses of soap have become innumerable and varied. Its largest market is in the home, where its chief uses are as toilet soap and as laundry soap. There are, however, very many industrial applications for soap because of its wetting, emulsifying and cleaning powers. Soap is now finding expanding use in many commercial applications such as the production or processing of plastics, metal and glass polishes and cleaners, wool, pharmaceuticals, synthetic rubber, as well as in road building and maintenance.

The soap industry has progressed in terms of improved products and has benefited from an increased appreciation of cleanliness.

Another outstanding development during the past 40 years has been the synthetic detergents. They are considered by some to be

*Sales at plant.

the greatest single advance made in the last forty years of progress. Their origin can be traced back to the German textile industry in 1916. The Germans made further developments in the synthetic detergents by introducing the Igepons in 1925. Synthetic detergents were finally imported into America in the early thirties in the form of the fatty alcohol sulfate known as "Gardinol."

The textile industry can take credit for pioneering this now well-established group of surfactants which has made such tremendous inroads into the household detergent market as well as into industrial fields, some related to and others completely divorced from the field of fabrics and fibers. Synthetic detergents were needed as a stable cleansing agent effective in the presence of lime salts, metallic salts and acids.

The production of synthetic detergents began slowly. The initial entry of synthetic detergents into the household detergent field was around 1931 with the advent of "Dreft" on the retail market. Two years later synthetic detergents were being made by a couple of manufacturers having a handful of customers. The total production of synthetic detergents reached 100,000,000 pounds by 1940 and the industry was established. By 1946 the production of synthetics had reached 275 million pounds, while soap output for that year was over ten times as great.

The Association of American Soap and Glycerine Producers calculated factory sales of synthetic detergents to be slightly under the one billion pound mark in 1949 and slightly over a billion pounds in 1950. At plant syndet sales figures for other years are as follows: 1951, 1.4 billion pounds or 36 percent of the total sales of solid soaps and synthetic detergents; 1952, 1.75 billion pounds or 40 percent of total hard soaps and synthetics. For the first half of 1953 the Soap Association reported sales of slightly over 900 million pounds of synthetics, which represented an increase of

25 percent over the first half of 1952. Synthetics for the first half of this year represented 52.7 percent of the industry's total sales of soaps and detergents. If this steady increase in synthetic detergent sales continues, the predictions made several years ago that the sales of synthetic detergents would reach two billion pounds by 1954 or 1955 is almost assured.

This rapid sales growth of synthetic detergents was the result of the following circumstances:

1. Shortages and high prices of fats and oils during and following World War II, which gave the synthetics an opening into the packaged detergent market.
2. The superior performance of synthetics in hard water and sea water, and even in the presence of acid and alkaline solutions. This represented a marked improvement over soap for all washing operations in hard water areas.
3. The need of a new gimmick which advertising-conscious soap companies could promote was filled by the synthetic detergents.
4. The development of complex phosphates and carboxy methyl cellulose as builders improved the synthetics as washing agents for cotton and thus further expanded their sale.

In addition, surfactants possessed the following outstanding properties:

1. Excellent wetting ability
2. Neutrality in solution
3. Nonhydrolyzing
4. Solubility and effectiveness in cold water
5. Ready rinsability
6. Resistance to hard water
7. Stability to acid and alkaline solutions
8. Dispersing action
9. Emulsifying action
10. Foaming properties
11. Tastelessness

In 1952, according to the Association of American Soap & Glycerine Producers, approximately 350 million pounds or 20 percent

of the surfactants were sold and consumed for industrial application. The balance of 80 percent or roughly 1.4 billion pounds went into household packaged products. An estimate of the actual breakdown of industrial applications is as follows:

	Percent
Laundry and dry cleaning	9
Textile processing	15
Sanitation and food processing	30
Plant and equipment maintenance	9
Direct military	8
Metal cleaning, etc.	7
Automotive maintenance	7
Plasterboard, concrete, etc.	6
Agricultural insecticides	5
Miscellaneous	4

The majority of synthetic detergents made today are of non-fat origin, primarily the alkyl aryl sulfonates with some alkyl sulfonates. The alkyl sulfates are the main type of surfactants derived from fat that is produced in large volume.

Over 800 surfactants are commercially available by brand name in the United States today, but only a few have any significance on a volume basis.

Detergent Types

THE industry has classified surfactants broadly as anionic, cationic and nonionic. Of these types the cationics represent the smallest volume. In 1952 there were approximately twenty million pounds of cationics manufactured, consumed, and/or marketed. This group of compounds has been growing steadily. They are largely used as bactericidal, antiseptic and germicidal agents. As such they are widely used for sanitizing dishes, dairy equipment, etc. In addition, because of their reverse detergency properties, whereby they are substantive to many nonpolar surfaces, and aid oil adhesion to those surfaces, they are finding increased applications. Illustrations of the application of these properties include: affixing emulsified wax to paper fibers and conditioning human hair by rinsing

Technological changes in the past 40 years have wrought great changes in soap products and marketing methods. Now half the number of soap firms sell three times as much as in 1913.

with an emulsion containing cation active agents.

Other applications for cationic agents are continually being developed. Some of the principal uses are: as softening agents and dyeing assistants in the textile field; as corrosion inhibitors in drilling and acidizing of oil wells; in metal processing, and as lubricating oil additives.

The most important synthetic detergents, in terms of volume, are the anionics. The principal types of surfactants classified as anionics are listed below in order of their volume:

Alkyl aryl sulfonates
Alcohol sulfates
Petroleum sulfonates, both aliphatic and aromatic
Sulfonated acid amides
Miscellaneous sulfates and sulfonates

Of this group the petroleum-based alkyl aryl sulfonates are truly the work horses of synthetic surfactants with over 400 million pounds being produced in 1952, based on 100 percent activity. Because of their excellent all around properties and low price they have attained a prominent position in both household cleaners and industrial uses, especially in hard water areas.

As the market for alkyl aryl sulfonates increased in volume, a change occurred in marketing practices. Originally a drum-dried product of 35 to 40 per cent active sulfonate (the balance sodium sulfate) was sold to the industrial trade. This type of product was of no interest to the large soap companies who were accustomed to spray drying and packaging soap. As a re-

sult, two distinct products were developed:

1. An alkane (alkylated aromatic) which had to be sulfonated and neutralized by the users.
2. An alkyl aryl sulfonate slurry which could be spray dried after the addition of builders, fillers, etc.

Of the anionics, the alcohol sulfates are the next largest classification, with approximately 113 million pounds on 100 percent active basis produced in 1952. These alcohol sulfates have found use in both light and heavy duty packaged detergents as well as in rug cleaning, cosmetics, textile processing, shampoos, dentifrices, metal processing, de-inking, papermaking, etc.

Nonionic surfactants have been increasing in the past few years, but not nearly as rapidly as the anionics. This somewhat slower growth has been due to the following factors:

1. The majority of nonionics are liquids, which makes them difficult to use in the household packaged detergent market.
2. They do not have the high foaming characteristics of the anionics.
3. Their cost, in general, is greater than that of the alkyl aryl sulfonates.

Nonionics, differing in character from soap and various sulfonated products, began to replace both, first in textile applications and, more recently, in food, cosmetics, pharmaceuticals, paints, household detergents, agricultural sprays, latex emulsions, cutting oils, wall cleaners, polishes, wax and oil emulsions, etc. In addition, increased sales of

liquid household detergents may anticipate a sharp increase in the production of certain types of nonionics which are now being used as foam stabilizers as well as detergents in this field. Most of the principal liquid detergents now on the market contain some nonionic of the foam stabilizer type.

There are a number of different nonionic surfactants now being produced and within a certain type there are numerous variations. Some of the principal types include:

1. Alkyl aryl polyglycol ethers
2. Aliphatic polyhydric alcohol esters
3. Aliphatic polyhydric alcohol ethers
4. Oxyethylated aliphatic mercaptans
5. A group of fatty acid alkanol amides which are regarded as nonionics by the trade
6. Ethoxylated alkyl amines
7. Ethoxylated fatty acid amines

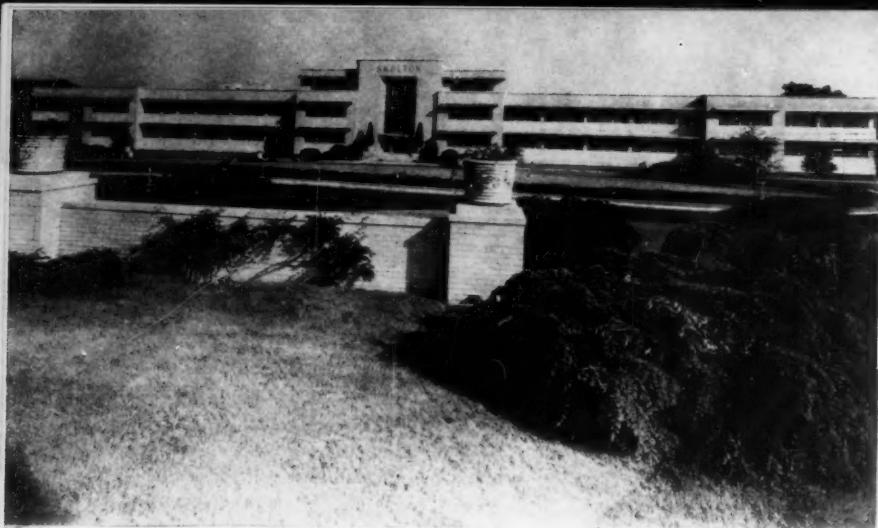
Each of these nonionics has certain surface active properties that give some advantages over others.

Nonionics are thought of mainly as emulsifiers. In general they are poor to fair foam producers, good dispersing agents, excellent solubilizers and good detergents. Some estimates indicate that the 1952 production of all nonionics totaled about 90 to 100 million pounds on a 100 percent active basis.

Technological Changes

ALTHOUGH the synthetic detergent industry is slightly over twenty years old in this country there have been a number of technological advances, numerous product changes, process improvements, specialization, new uses and applications which have accompanied its rapid expansion. Many of the equipment changes, quality control methods and chemical additives which were developed by the soap industry have been instrumental in the tremendous development of the surfactant industry.

(Turn to Page 95)



Main building of Shulton, Inc., on Route 6 in Clifton, N. J.

THE perfumer engaged in developing useful soap perfume compositions draws the constituents of his formulae from a long list of well-established essential oils, gums, resins, isolates from natural materials, extracts from and derivatives of vegetable and animal substances on one side and a constantly growing number of synthetic aromatics and specialties on the other. Naturally, there are reasons for the use in a particular formula of materials derived from so many different botanical and chemical groups. Each of them serves a purpose previously conceived by the perfumer—all of them together make the finished perfume compound.

In spite of the high costs in some instances, it is desirable to include in the formula such essential oils as clove, ylang ylang, palmarosa, petitgrain, lavender, bergamot, to name just a few. These materials impart floweriness, sparkle, lift, roundness, natural freshness and generally pleasing notes to the composition. Furthermore, such old standbys as patchouli, vetivert, geranium and sandalwood oils are indispensable, in spite of their high prices, for the beautiful depth and richness, fixation and rounding-out effects, coverage, strength and long lasting odor properties they furnish in soap perfume compositions. Isolates from fractions of some of the lower-price



Standing in front of the shipping dock at the Shulton plant are George L. Schultz, (right) president and founder of the chemicals division and his assistant, R. E. Brainard.

plant oils, such as geraniol and citronellol from citronella oil, or citral from lemongrass oil are often found in formulae for soap perfumes, although the odor value of some of them in soap is low and sometimes of questionable value.

Fractions derived from the distillation of certain natural essential oils yield the above mentioned isolates. By-products of such distillations, known to the chemist as "heads and tails", or in the perfumer's language "terpenes and residues", are well-liked constituents in low cost soap perfumes as they provide "punch" or "kick" to the milder smelling ingredients which are skillfully mixed with these less refined substances. The principle in blending together all these materials to the desired harmonious odor note is to select suitable materials from the standpoint

of odor compatibility, color, stability in soap and cost. The final perfume blend must be of sufficient odor strength to come through the dense soap medium satisfactorily. Other standard requirements are the release of a pleasant aroma into the air when the soap is used, as well as the leaving of a delicate scent on the skin after use.

Of the group of gums, resins and balsams, gum benzoin, olibanum and labdanum, as well as Balsam Peru, do a good job in soap perfumes by providing "warmth" and sweetness of odor as well as fixation. Traces of civet, one of the four well-known fixatives of animal origin, are often used by the soap perfumer to give a composition strength, depth and fixation and thus make the odor more substantial.

Chemically speaking, natural oils may contain terpenes, primary,

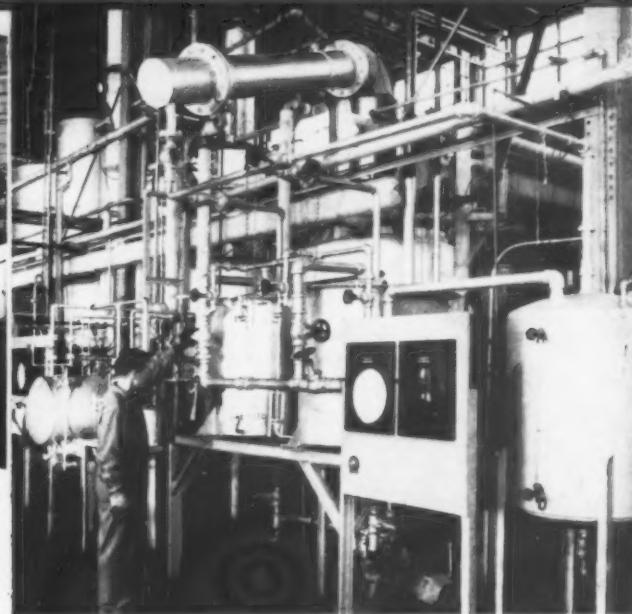
S IN SOAP PERFUMERY

By **Oliver L. Merton and
George F. Foy**

Fine Chemicals Div.
Shulton, Inc.



Section of the research laboratory in which new Shulton products are developed.



Corner of the distillation room where crude products are further refined.

secondary or tertiary alcohols, aldehydes, ketones, esters, acetals, lactones and many unknown components of complicated structure. Therefore, when an essential oil is added to a blend of perfume ingredients, any number of effects may result in the mixture, such as chemical reactions, displacements, rearrangements, new chemical compounds, new equilibria, polymerization, resinifications and other changes.

The terpenes present in essential oils add odor pungency, usually described as a "sharp" note, often displeasing. Further, due to their unsaturated nature, they polymerize easily, resinify or change, acquiring a harsh, turpentine-like note. Yet, as previously mentioned, certain percentages are desirable in some soap compounds for the "kick" they provide.

Many esters occurring in

natural oils are weak. Even if the odor is satisfactory, they may be unstable and subject to saponification or hydrolysis in prolonged contact with the traces of aqueous alkali present in soap. If several esters are present in the perfume mixture, ester splittings, re-esterifications or ester interchanges may take place. Some of the newly formed esters may have a better, some a less desirable odor — the mere fact that the odor equilibrium is thereby disturbed is enough reason to expect odor changes. Further, not every alcohol isolated when an ester splits has the lively freshness characteristic of esters; some may be dull, flat and uninteresting from the perfumer's standpoint. The acids generated by ester hydrolysis usually are of little or no odor value in soap as they tend to be neutralized by the excess soap alkali. When this neutralization occurs, it also dis-

turbs the alkali balance in the soap cake which previously was carefully established by the soap maker.

Some naturally occurring aromatics of phenolic nature, such as eugenol present in clove oil, suffer neutralization of their phenolic hydroxyl groups when incorporated in soap. Thus they are converted to odorless alkali salts, and worthless from the odor standpoint. Therefore, a certain percentage of the quantity added drops out of the odor composition, again disturbing the harmony of the odor blend.

Some of the well-known fruit oils, such as bergamot, lemon and orange, are of acidic nature. They are neutralized also by the alkali traces in the soap, a feature they have in common with the bodies of phenolic nature, such as eugenol. However, the big difference lies in the nature of the remaining bodies. The remaining surplus phenolics are

apt to act as a soap stabilizer or antioxidant or at least as a rancidity retarder. Surplus acidic fruit oils, however, lack these protective features for the neutral and, therefore, unprotected soap. In such a case, both the medium and the added material, i.e., the soap and the oil, would be affected, depending on the balance. That is, the soap might turn rancid and the oils converted to turpentine-like, resinified odor bodies. Gone would be the life and freshness of the oil and the original odor of the perfume composition. To correct these difficulties, stabilizers for natural oils have been employed with varying success, but have only been of limited effect, at best.

Salicylates, for example, are able to exert a stabilizing effect in soap due to their phenolic character. Their drawback, however, lies in the possibility of discoloring the soap when iron is present, which causes the formation of colored iron salts of salicylic acid.

Synthetic aromatic chemicals started long ago to replace satisfactory, wholly or in part, some of the natural oils in perfumes; (with the perfumer's apologies to Mother Nature). These synthetics possess the advantage of being produced under controlled chemical conditions and, therefore, are of uniform quality, known strength and constant availability. The quality and output of the synthetics are standard as their production does not depend on the soil conditions, days of rain or sunshine during the growing season, nature of the fertilizer or other variables which determine the well-being of plants and, accordingly, the quantity and quality of their yield of natural oils.

Role of Synthetics

SYNTHETIC aromatics allow the perfumer freedom of action. For example, the addition of a single aromatic chemical to a mixture of various perfume materials will produce the straight odor effect known for that particular aromatic. Essential oils do not possess this property in the same well-



View of the Shulton instrument laboratory which contains infrared spectrophotometer used for research and quality control.

defined manner, as they are complicated mixtures of many substances of varying percentages and manifold properties. They are practically real bouquets or compounds made by Mother Nature.

Synthetic aromatics are mixed with the natural materials in varying proportions by the soap perfumer to give a strong yet harmonious odor blend.

In spite of the great number of synthetic aromatics at the disposal of the soap perfumer, some of them can only be used with caution or in limited quantities. For instance, coumarin, nitromusks, especially musk xylol, as well as heliotropine crystals, are known to discolor white soaps in certain combinations. Heliotropine crystals are apt to cause skin irritation if their percentage in the perfume mixture is too high. Likewise, their odor stability in soap is limited. For practical purposes, vanillin has to be excluded from use in soap perfumery, except for occasional addition of traces in colored soaps. Vanillin can turn any light-colored soap mass into a chocolate colored material in a very short time.

Aware of these and other shortcomings of some commonly used aromatics, our chemists have for some time, recognized the desirability of producing, by way of research, new and improved soap aromatics which would be free of such drawbacks. The perfume chemist's goal is the development of perfuming materials which would have well-defined natures, are stable, simple to handle, of standard quality

and which would not introduce side problems when added to complicated perfume mixtures. Aromatics to be developed and their properties included:

1—A vanillin or ethyl vanillin type odor effect produced by a chemical that would not discolor soap.

2—A basic heliotrope-like odor complex which would be free of the undesirable properties of heliotropine crystals.

3—A pure, synthetic rhodinol equal in quality to the natural isolate from geranium bourbon oil, yet low enough in cost to be more freely usable in soap perfume compositions.

4—A lively smelling ester having the flowery-fruity odor characteristics of linalyl acetate, and having great stability and strength in soap, yet of lower cost.

5—A sweet-floral adjunct of synthetic nature that would eliminate or modify the coarseness of a perfume base made up of aromatic chemicals. One which would thus be able to replace at least in part, the expensive essential oils added to provide natural freshness and a finer, more delicate bouquet note.

Five new aromatics* recently introduced by the fine chemicals division of our company after successful use in toiletries and soaps

*1—Vanitrope; — 2—Heliotropine Liquid; —
3—Rhodinol Shulton; — 4—Lignyl Acetate;
— 5—Floralizer #12.

appear to offer the properties outlined above.

A vanilla-type sweetening agent (propenyl guaethol) can be used in soap either pure or in the form of its amorphous concrete which allows substantial savings in price. The pure grade is mainly manufactured for flavoring purposes or for use in fine perfumery. The new vanilla type perfume is useful as a sweetening and rounding-out agent in perfume mixtures. It also possesses the smoothing and rounding-out properties of vanillin, which often works wonders when added in mere traces to a rather coarse mixture of perfume raw materials. However, unlike vanillin, the new material does not discolor soap. In concentrations of one to five percent of the perfume oil, it adds sweetness and warmth. Like vanillin or ethyl vanillin, or a true vanilla extract, it stimulates the olfactory nerve and improves odor and taste appreciation.

It blends very well with perfume materials of widely different character, with the common crystals on one side, such as vanillin, coumarin, heliotropine, nitromusks, etc., and gives improved odor effects with fine aromatics on the other side—for instance, with hydroxy-citronellal or vetivert acetate.

Also new is a liquid type heliotropine which has certain advantages over heliotropine crystals. It is closer to the real heliotrope odor than the latter, is practically non-irritating, is color and odor stable in itself and stable in soap. The cost of this new material in compounds is approximately that of heliotropine crystals. It can be substituted in perfume formulae for the odor effect hitherto furnished by heliotropine crystals.

The use of higher percentages of rhodinol in fine soap perfumes is possible as a result of a new rhodinol we have synthetically made. Because of its chemically standardized quality and low cost, together with possessing the well known richness and depth of the rhodinol character, it has opened the way for a more extensive use

of this fine rose-geranium type alcohol in soap perfumes. It can be used wherever rhodinol from geranium bourbon is added, at a substantial saving in cost, particularly in building up a strong and stable rose odor complex of a fine character.

A stable, low priced ester possessing the lively, flowery-fruity odor characteristics of linalyl acetate is our third new synthetic. It is used in place of linalyl acetate in soap perfume compounds, to which it imparts strength and stability without the chemical note of terpenyl acetate. The new aromatic lends itself to building up or strengthening odor complexes known to be high in ester contents of this type, such as bergamot or lavender. Its derivation from domestic raw material, as well as its chemically controlled uniform quality, have destined this low-priced ester to become a standard soap aromatic.

Another new aromatic is characterized by "type-less," yet delicate and sweet floweriness and an intense neutral freshness and sweetness. The absence of a pronounced odor type makes it suitable as a further addition to finished floral or bouquet type formulas. For instance, five to 10 percent addition to a finished lilac, carnation or muguet composition greatly refines the odor effect without changing the odor note itself. The new synthetic is compatible with existing perfume raw materials including those aromatics described above. As a matter of fact, new odor effects can be worked out by the perfumer by combining the new floral odor with the new vanilla and heliotropine types.

The price of the new floral has been kept low enough to permit its use in soap and in other branches of perfumery. It is a stable, non-discoloring material and does not throw off established odor characteristics of perfume blends. Yet, it imparts to them a finer note, together with the delicate lift provided only by some of the natural essential oils, such as bergamot,

ylang ylang and some of the flower absolutes. Where the latter are being included in perfume compositions, the amount of such absolutes can be reduced without loss of the refined odor effect they bring about. The trick of the creative perfumer simply is to bring the compound to a higher level of perfection by first adding enough of the new synthetic then top off the refined odor blend with a smaller percentage of absolutes than the formula originally called for. Thus, this material could, in a justifiable manner, also be called the platform or stepping stone for absolutes in perfume compounds.

As the perfumer handles a great number of synthetic floral odors, as such or as odor complexes, in piecing together harmonious odor blends of a more complicated structure, the new odor should be used widely in odor refinement in perfume work.

Since many of the readers of this article may be wondering why a firm such as ours, which is basically a manufacturer of finished soaps, toiletries and other cosmetics, has gone into the aromatic chemicals field, the following explanation may be helpful.

One of the main aims in most fields of manufacturing is to become as basic as possible in materials from which the final products are made. By so doing, a broader and more secure foundation is obtained. But a sound business foundation and security for employees are not the only advantages. In addition, the high quality of final products can be better controlled and assured and economies can be realized to the advantage of both manufacturer and consumer.

Shulton had recognized the value of such a trend some time before starting the manufacture of chemicals. The company has been making such items as its own set-up boxes, plastic bottle closures, attractive plastic display units varying from bottle sleeves to finely wrought "flower" supports for perfumes.

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G. A. WRISLEY, President



ROY W. PEET, Manager



E. SCOTT PATTISON, AASGP

Soap Industry Meeting in

ADIVERSIFIED program consisting of individual and panel discussions of new developments in soaps, synthetic detergents, glycerine, fatty acids and other raw materials has been arranged for the 27th annual meeting of the Association of American Soap & Glycerine Producers, to be held at the Waldorf-Astoria Hotel, New York, Tuesday, Wednesday and Thursday, Jan. 26-28.

In addition to a review and forecast of economic conditions generally and within the soap industry, three panels dealing with packaging, raw materials and developments in soap and synthetic detergent use are scheduled for the soap industry meeting.

Meetings of the Fatty Acid, Glycerine, Specialty Soap, and Industrial Soap divisions will be held during the three-day convention. Three papers dealing with trends affecting fatty acid usage in alkyd resins, emulsifiers and plasticizers, as well as a discussion of the role of the university in research on fats and oils and a review of recent advances in engineering and equipment for fatty acids will highlight the all-day meeting of the Fatty Acid Division on January 26. A group luncheon and a cocktail party, sponsored by *Soap & Sanitary Chemicals* magazine are also

scheduled for the first day of the industry's meeting.

A general session the morning of January 27, marks what is generally regarded as the formal opening of the soap industry meeting. At this session, the address of AASGP president George A. Wrisley of Allen B. Wrisley Co., Chicago, will be given. Household soap trends and the economic outlook for 1954 will be discussed and E. W. Wilson of Armour & Co., Chicago, will report on cleanliness promotion.

The luncheon Jan. 27 will be highlighted by the presentation of the annual glycerine awards and an eye-witness report on conditions in Russia by Associated Press correspondent, Eddy Gimore.

Simultaneous sessions of the Glycerine Division and the Specialty Soap Division will be held the afternoon of Jan. 27. Glycerine research activities will be reported on by Dr. C. S. Miner of Miner Laboratories, Chicago; glycerine advertising and publicity will be reviewed by H. H. Besuden of Procter & Gamble Co., Cincinnati, and Fred Messner of G. M. Basford Co., New York advertising agency. Trends in glycerine use in the toilet goods industry and the economics of glycerine today and tomorrow will be covered by Dr. E. G. McDonough of Evans Research & De-

velopment Corp., New York, and E. Scott Pattison of the Soap Association, respectively.

Meanwhile, the Specialty Soap Division will be hearing a panel on selection, training and compensation of salesmen. Participating will be R. F. Huntley, president of Cowles Chemical Co., Cleveland; E. B. Osborn, president of Economics Laboratory, Inc., Minneapolis, and King Whitney, executive director of the Personnel Laboratory, New York.

The "Maid of Cotton for 1954" fashion show and a cocktail party, for which *This Week* magazine is host, conclude the day's activities.

The third and final day of the meeting opens with breakfast, for which *True Story* magazine is host. A general session follows that morning with three panel discussions on: Packaging, the outlook for basic materials, and developments in soap and detergent use. The packaging panel is to be manned by Stanley Ross of Pneumatic Scale Corp., Quincy, Mass., who will discuss what's new in the mechanics of packaging. Donald Deskey, New York packaging consultant, will give pointers in package design, and quality control in packaging will be the subject of a talk by Walter E. Soay of Gardiner Board & Carton Co., Middletown, O.



E. W. WILSON



JOHN W. BODMAN



E. G. McDONOUGH

New York City, January 26-28

Speaking on the effect of the mechanical dishwasher on product trends will be R. E. Christie of General Electric Co., New York. The effect of the automatic home laundry on product trends will be discussed by E. O. Morton of Westinghouse Electric Corp., Pittsburgh, and concluding the panel, will be Dr. Daniel A. Terry of Bon Ami Co., New York, who will speak on liquid detergents.

Participating in the panel on raw materials will be George L. Prichard of the U. S. Department of Agriculture, who will cover the outlook for soap making fats. Dr. J. E. Magoffin of Eastman Chemical Products, Inc., New York, will speak on the use of tallow in ani-

mal feeds and John W. McCutcheon, New York consultant, is to review the use of fats for synthetic detergents.

Concluding the morning's session will be a discussion of composition of synthetic detergents by Dr. John W. Bodman, former director of research of Lever Brothers Co., New York.

The group luncheon on Jan. 28 will be addressed by William L. Laurence, science reporter for the *New York Times*. His topic is "The Significance of Atomic Energy." Immediately following the luncheon, the annual business meeting of the association will take place. It features reports of manager Roy W. Peet, treasurer Nils

S. Dahl of John T. Stanley Co., New York, and the nominating committee. The new board of directors is elected at this time and then meets to elect officers for 1954.

A meeting of the Industrial Soap Division takes place at 3:00 p.m., Jan. 28. Two talks are scheduled: "Market Research for Industrial Selling" by Arthur G. Tunstall of Pennsylvania Salt Manufacturing Co., Philadelphia, and "Cost Accounting for Industrial Soaps and Detergents" by Winfield L. McNeil, management consultant.

The reception from 6:30 to 7:30 p.m., followed by the banquet and entertainment provided by the five major radio and television networks conclude the meeting.

E. B. OSBORN

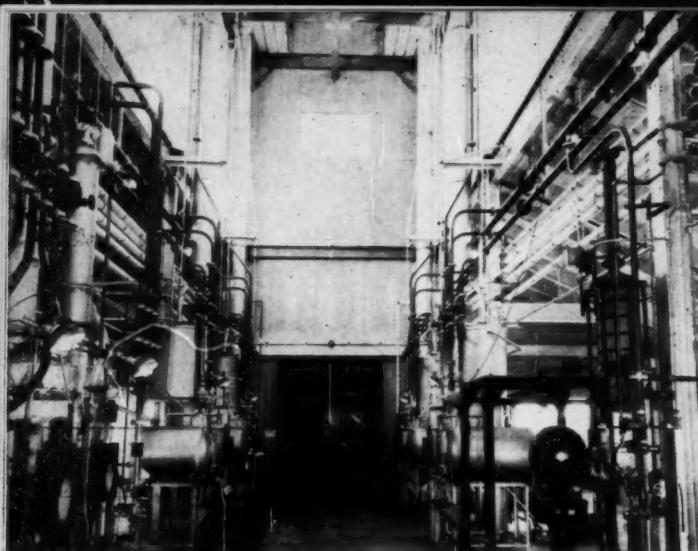


JOHN W. McCUTCHEON



R. F. HUNTLEY





The still room looking east.



Tanks farm of new Van Ameringen plant.



Aerial view of water storage and condensing units.



Exterior view of research laboratory.

Visit New

AS part of the annual sales meeting of van Ameringen-Haebler, Inc., New York, sixty members of the sales and executive staff and members of the trade press toured the new company plant at Union Beach, N. J. on December 14. Preceding the plant visit, a luncheon was held at the Hotel Dorset, New York, which was addressed by J. Walter Lovatt, vice-president of Vick Chemical Co., New York, on "What the purchasing agent expects from salesmen." A. L. van Ameringen, president of the company, also spoke.

The group journeyed to the new plant by bus and was conducted through the first nine buildings completed at the new site, seeing large scale aromatic chemical production and research where 300 new materials are developed annually and evaluated for use in perfuming. The tract totals 154 acres of which six have been cleared and fenced for present operating units. Several additional buildings are in the course of construction.

Units operating at present consist of research and control laboratories, still building, reaction building, power plant, hydrogenation building, phenyl ethyl alcohol unit, electrical power unit, and office building and personnel facilities, and a tank farm. The main laboratory building covers 3,000 square feet and contains the latest facilities for product control and organic chemical research.

The phenylethyl alcohol building houses the three-stage continuous process. Due to the highly inflammable nature of this process, the building is explosion proofed and protected by an extensive carbon dioxide fire fighting system. Solvent storage is provided underground in five 10,000 gallon tanks.

Van A-H Plant

Two tanks of 6,000 and 10,000 gallons hold the crude phenylethyl alcohol from which it is pumped to the still house for vacuum distillation. Only phenylethyl alcohol is made in this building.

Hydrogenation is carried on in a separate building where this process is applicable to aromatic chemical production. The unit consists of three high-pressure autoclaves, the largest of which can handle 500 gallons at 36 atmospheres pressure. Adjacent to the hydrogenation building new construction is under way which will house a new type of catalyst reactor for organic synthesis.

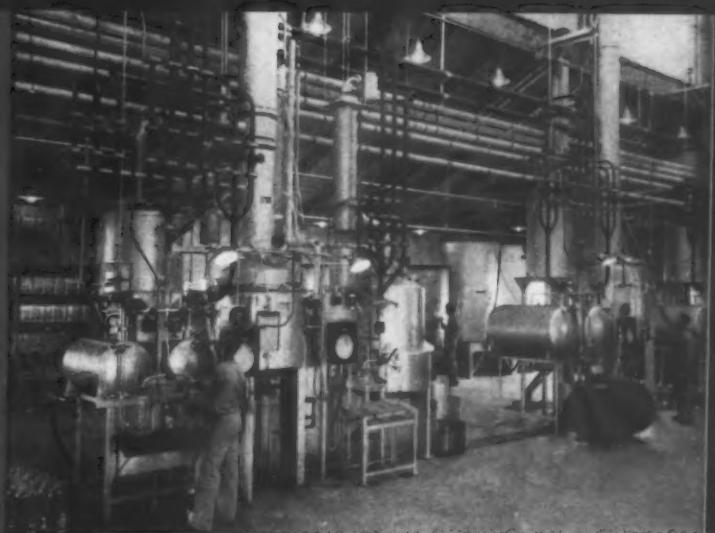
The reason for building this new plant, according to A. L. van Ameringen, is the increase in production and development of numerous new aromatic chemicals which finds the facilities of the firm's No. 1 plant at Elizabeth, N. J. inadequate to handle demand. During 1953, according to Mr. van Ameringen, the company's business increased 22 per cent, necessitating the larger production facilities of the new plant. The company will continue to operate its Elizabeth plant as heretofore. Both plants are operating at present on a seven-day week.

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Westvaco Ups Neuberg

Louis Neuberg, vice-president in charge of sales for the Westvaco Chemical Division of Food Machinery & Chemical Corp., New York, was recently appointed vice-president of the chemical divisions of the corporation. These divisions include the two newly formed Chlor-Alkali and Mineral Products Divisions, as well as Buffalo-Electro Chemical Co. division of FMC, Niagara Chemical Division and Ohio-Apex Division. Mr. Neuberg's office remains in New York.

South side of the still room.



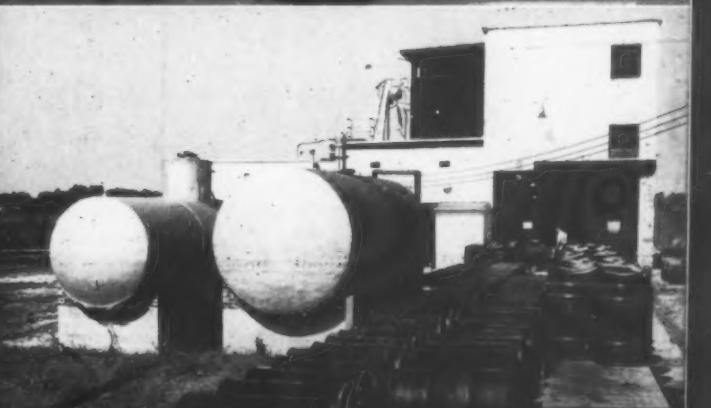
Exterior of reaction and still room.



West view of the research laboratory.



Phenylethyl alcohol building.





Cruiser-size extractor at Navy Laundry School.



LST laundry unit; the school's smallest.

Evaluation of Sea-Water Laundry Detergents

WHEN visually evaluating the loads, these factors were considered carefully, yet the heterogeneous history of previous launderings of the test loads could have influenced the subjective evaluation.

A supplementary practical laundry study, utilizing cotton huck towels, was therefore conducted to determine the pattern of behavior of detergent "E" in a more closely controlled experiment with respect to the previous history of test loads. Detergents "D," "E," "B" and "C" were selected for this test since both the cloths and the loads ranked "C" in the top group, "B" in the middle, and "D" lowest. The results of the practical tests on the huck towels alternately soiled and laundered are shown in Table No. 9.

The results of this experiment showed that detergent "E" did not belong in the top group but should be in the middle or low group as shown by the cloth rankings, coarse as they may be. The results of this experiment should

not be interpreted to discredit the load evaluations, but should emphasize the need for controlling even the practical loads in a detergency study. Inasmuch as detergent "C" showed up best and "D" poorest in this experiment, it confirms the view that standard soil cloths can be useful for discriminating between the best and poorest detergents in a test group.

It is to be noted that the dif-

ference between the loss of reflectance of towels laundered with detergent "C" (best) and that of detergent "D" (poorest) was only four percent. This difference in reflectance is hardly indicative of the vast difference in appearance and acceptability of the two sets of towels. A towel may have received an unsatisfactory rating because of three or four hand imprints caused by ordinary soiling which were not

Table No. 9
Results of Huck Towel Launderings

Deter- gents	Number Towels Issued	Number Towels Not Returned	Number Towels Unused	Wash No. 1		Mean* (30 Readings, 15 Towels)
				Rated as: Satisfactory	Unsatisfactory	
E	92	5	0	36	51	77.2
C	92	6	0	81	5	79.0
B	92	4	8	56	24	77.7
D	92	12	30	11	39	77.4
Wash No. 2						
E	92	16	22	9	45	75.3
C	85	8	20	47	10	77.8
B	85	7	21	22	35	77.3
D	92	4	27	6	55	73.7

*The initial mean reflectance of the towels was 80.1 based upon 100 measurements on 50 towels.

*Paper presented before 39th mid-year meeting, C.S.M.A., Chicago, May 19, 1953.



Whiteness learn to operate laundry equipment at Navy Laundry School of Anacostia, D. C.
At about 1,000 Navy shipyards.

By Rubin Bernstein
and Harry Sosson*

Industrial Test Laboratory,
Philadelphia Naval Shipyard

removed by laundering. The subsequent reflectance measurement of that towel may have been made on an area other than the soiled (smudged) portion (each towel was measured in the same geographic area for the sake of uniformity), thus evidencing a reflectance measurement unrealistic with respect to the satisfactoriness of soil removal. If four or five cycles of soiling and washing were conducted, the dif-

ference in reflectance between the two sets of towels would probably widen to a degree that would better represent the difference in appearance and acceptability.

Only two cycles of soiling and washing were required to establish a pattern of behavior in the towel experiment. It had been intended to run each towel group through four cycles, but these were reduced to two because a large num-

ber of towels were returned unused. The reluctance of the individual to use a towel was believed due to the soil remaining on the towel even after laundering.

Practical laundries—terry cloth towels:—Table No. 10 shows the mean reflectance values for the terry cloth towels each subjected to one laundering in a soiled load with a particular detergent.

Table No. 11 shows the mean reflectance values for terry cloth towels each subjected to ten laundries with a particular detergent.

On the basis of experience that a difference of approximately two percent reflectance can be detected visually, the detergents are ranked below in Table No. 12 for relative whiteness retention efficiency.

Table No. 12
Relative Whiteness Retention Rankings
—Terry Cloth Towels
Rank One laundering Ten laundries

1	A, C	A, C
2	D	D
3	H-1, I, F, B, K	K, E
4	G, E	B
5		F
6		G
7		I, H-1

Practical laundries—whiteness retention swatches:—The mean loss in reflectance of the white swatches is shown in Table No. 13:

Figure No. 1 is a graphical

Table No. 10

Detergent	Whiteness Retention of Terry Cloth Towels—One Laundering		
	*Initial Reflectance, percent	**Final Reflectance, percent	Decrease in Reflectance
A	85.0	80.5	4.5
C	85.0	79.1	5.9
D	85.0	76.1	8.9
H-1	85.0	74.1	10.9
I	85.0	73.9	11.1
F	85.0	73.2	11.8
B	85.0	72.6	12.4
K	85.0	72.6	12.4
G	85.0	70.8	14.2
E	85.0	70.8	14.2

*Mean value based on 50 readings on 25 towels

**Each value represents mean of 4 measurements per towel.

Table No. 11

Detergent	Whiteness Retention of Terry Cloth Towels—Ten Laundries		
	*Initial Reflectance, per cent	**Final Reflectance, per cent	Decrease in Reflectance
A	85.0	75.1	9.9
C	85.0	73.7	11.3
D	85.0	67.1	17.9
K	85.0	64.2	20.8
E	85.0	64.2	20.8
B	85.0	62.2	22.8
F	85.0	59.9	25.1
G	85.0	57.3	27.7
I	85.0	52.9	32.1
H-1	85.0	52.5	32.5

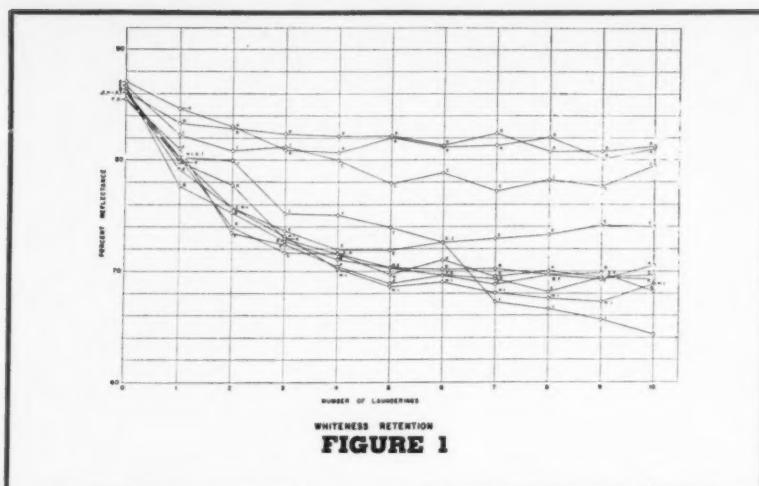
*Mean value based on 50 readings on 25 towels.

**Each value represents mean of 4 measurements per towel.

representation of the loss in reflectance of the whiteness retention swatches for each detergent through 10 launderings.

The whiteness retention data of Tables No. 10 to 13 show that detergent "C" is far superior to any of the other sea-water compounds in either the single cycle or multi-cycle tests. In fact, detergent "C" has values which are very close to those obtained for detergent "A," the ideal combination of built high titer soap in distilled water. Detergent "D" is an anomaly in that it is apparently high in whiteness retention efficiency, but this is due to the fact that it is a poor detergent. Therefore, little soil is removed from the clothing and less deposits on the white swatches and terry cloth towels used for the whiteness retention observations.

The inclusion of terry cloth towels in the practical launderings was in effect a whiteness retention test. The towels were not soiled by use but from whatever soil they picked up in the wash wheel. Inspection of the results show that a single laundering did not give good distinction between detergents in regard to whiteness retention. On the other hand, in ten launderings, not only was better discrimination found, but also a much wider range between the best and poorest detergents. Lambert and Sanders (8) recognized this behavior and proposed a multicycle study as superior and more realistic than single cycle washes. They utilized a practical series of five alternate soilings and washings of roll towels, and measured both soil removal and whiteness retention effects with good correlation. We are in agreement with this principle; however, for specification requirements, a laboratory test showing the same result would be more practical. Such a test is now being investigated. It is evident that a detergent which is a poor soil remover could still show good whiteness retention characteristics in both single or multicycle exposures simply because a lesser quantity of soil is available



for the test piece to pick up. Detergent "D" is a good example. This behavior has been recognized by Vaughn and Suter (9), who prefer to conduct separate determinations to measure soil removal and whiteness retention properties of detergent systems. For whiteness retention tests, they use a detergent solution in which a comparatively high, fixed concentration of soil is present. Such a procedure is superior in principle to methods in which white swatches are included with soiled swatches. Vaughn and Suter base their evaluation of whiteness retention by this procedure using one wash. As previously mentioned, the results of this study favor a multicycle method. By extending the single laboratory procedure of Vaughn and Suter to a multicycle

test, such an approach might achieve a laboratory test that would correlate with the practical procedure of Lambert and Sanders.

The data for single cycle and multicycle redeposition swatches in the practical launderings point out essentially similar observations to those made for the terry cloth towels. In general, there is fair agreement between the towels and swatches in respect to the order in which they rank the detergents. It is of interest to note that the range for the loss in reflectance for the single cycle towels was 4.5 to 14.2 per cent and for single cycle swatches 2.3 to 6.7 per cent; for multicycle towels, the range was 9.9 to 32.5 per cent and for multicycle swatches 5.0 to 21.8 per cent. The

Table No. 13
Loss in Reflectance—Whiteness Retention Swatches

Single cycle—1 laundering		Multi-cycle—10 launderings	
Detergent	*Mean loss in Reflectance, per cent	Detergent	**Mean loss in Reflectance, per cent
A	2.3	D	5.0
D	2.2	A	6.0
C	3.0	C	7.0
H-1	5.1	E	12.1
I	5.5	F	15.0
G	5.6	K	15.4
F	5.8	G	15.4
E	6.1	H-1	17.3
K	6.4	B	18.5
B	6.7	I	21.8

*Each value represents the mean of 100 measurements.

**Each value represents the mean of 10 measurements

Table No. 14
***Cooperative Laboratory Results—Soil Removal**

American Conditioning House	A H I G C D E F B K
Armour and Co.	L A C K E B G F H - I
Atlas Powder Co.	A I H - I . G . C K E B D
Colgate-Palmolive Co.	C A H - I . E . K . B . I . G . F D
DuPont Co.	A C E B . G . I H F K D
General Aniline and Film Corp., Cloth No. 1	A E F . C . G . B I K . H - I . D
General Aniline and Film Corp., Cloth No. 2	A F . E . G K I C H - I B D
General Dyestuff Corp., Terg-O-Tometer	A B C E K H - I I . D . F . G
General Dyestuff Corp., Launderometer	A B C I H - I D . G . K . E . F
Lever Brothers Co.	C I . K E H - I . B . G D F
Monsanto Chemical Co.	E A C I F H - I . G . K . B D
Naval Clothing Depot	A B I G . H - I . C E K F D
Pennsylvania Salt Manufacturing Co.	A C I B K E F . G . H - I
Procter and Gamble, Launderometer	E C . F B . I . A K G H - I . D
Procter and Gamble, Terg-O-Tometer	C I . B A E F . H - I . K . G D
Rohm and Haas, G.D.C. No. 26	A B I C K E H - I . F . D . G
Rohm and Haas, PSC Cloth	H - I . E . A F . G . I . K C D . B
F. D. Snell, G.D.C. No. 26	A B C I K . H - I G D E F
F. D. Snell, Cloth No. 159	C A . I K H - I G D E B F
U. S. Testing Co.	C E . B . I K G . A . H - I F D
Wyandotte Chemicals Corp.	A I C . G . K B E D F
**Composite, by "ranking"	A C I E B G . K . H - I F D

*The groups in bold signify the detergents in that group are not different from each other.

difference in ranges was probably due to the different types of fabric, one being fluffy and highly absorbent, and the other a smooth, more tightly woven fabric. The data thus suggest the possibility of using a fabric like terry cloth to achieve bet-

ter discrimination and a wider range in whiteness retention tests.

Cooperative laboratory tests:—

A summary of the results of the cooperative laboratory tests, as reported by the National Security Industrial Association Advisory

Table No. 15
***Cooperative Laboratory Results**
Whiteness Retention

American Conditioning House	I . A . G . C E . H - I . B F D . K
Armour and Co.	A D . G . I C E K B F H - I
Atlas Powder Co.	Not reported
Colgate-Palmolive Co.	C I . G . A H - I . K D . E . F . B
DuPont Co.	A C G I B D . K F E H - I
General Aniline and Film Corp., Cloth No. 1	A E G . I C . F H - I . K D B
General Aniline and Film Corp., Cloth No. 2	A C . F G E I H - I . K D B
General Dyestuff Corp., Terg-O-Tometer	A . B . C D . E . F . G . H - I . I . K
General Dyestuff Corp., Launderometer	A . B . C D . E . F . G . H - I . I . K
Lever Brothers Co.	B . C . D . E . F . G . H - I . I . K
Monsanto Chemical Co.	A . I C . K E . G H - I . F . D B
Naval Supply Depot	C . A . J . D . H - I G . K . B . F . E
Pennsylvania Salt Manufacturing Co.	A . C I H - I G K . F . E . B D
Procter and Gamble	A . C H - I . E I D . B G F . K
Rohm and Haas, G.D.C. No. 26	G . H - I . I F . E . C . A . D B K
Rohm and Haas, PSC Cloth	H - I F . E . G . I . D . A . K C . B
F. D. Snell	D A I E C . G . K H . F B
U. S. Testing Co.	C L G A . H - I . D E K F . B
Wyandotte Chemicals Corp.	I K C E F D . G . A B
**Composite, by "ranking"	C I A . G . H - I E K D F . B

*The groups in bold signify the detergents in that group are not different from each other.

Committee for Detergents are tabulated below in Tables No. 14 and 15. The detergents are listed from left to right in order of decreasing effectiveness:

The cooperative laboratory test results, Tables No. 14 and No. 15, show no agreement with each other nor with any of the results of this investigation obtained so far. It is important to note the discrimination among detergents as denoted by the number of groups into which the detergents are divided by the various cooperating laboratories varies from three to eight for soil removal and from one to six for whiteness retention. Furthermore, where the cooperative laboratories reported a differentiation by an equal number of groups, the detergents in those groups differed widely.

The Naval Clothing Depot, Brooklyn, N. Y., one of the cooperative laboratories, performed a statistical analysis of the cooperative test results. The Clothing Depot recognized the heterogeneity of the tests and results, and utilized a "ranking" procedure wherein each set of test data was reclassified in the terms of the ranks obtained by the various samples over all the results. The composite or "pooled" rankings are listed in Tables No. 14 and No. 15 for soil removal and whiteness retention, respectively. No single cooperative laboratory's results were in agreement with the composite rankings for either soil removal or whiteness retention. Also, no agreement is evident between the composite rankings and the Industrial Test Laboratory's results. The net value of the composite rankings appears to be in discriminating only between the best and poorest detergents of the group tested.

Conclusions:

DIFFERENT brands of soiled cloths may judge the same detergents for soil removal capability.

Standard soiled cloths, in laboratory methods and in practical laundries, for evaluation of soil

(Turn to Page 99)



2 New Additions to our family of Detergent Chemicals—

SODIUM LAURYL SULFATE

ROHM & HAAS
announces two forms
of Sodium Lauryl Sulfate
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Low salt TRITON AS-30 (Liquid)

TRITON AS-35 (Paste)

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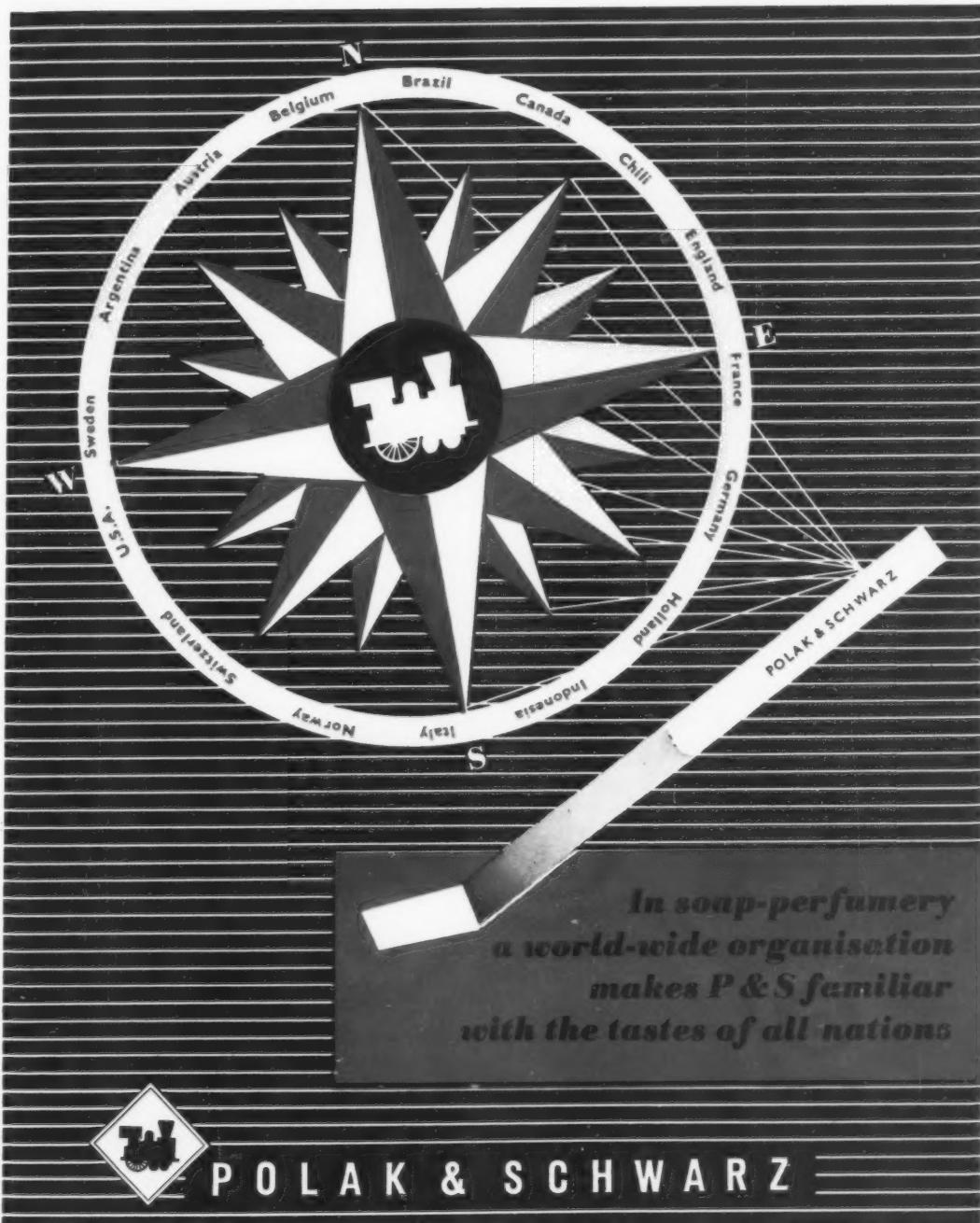
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News

Frank A. Connolly Dies

Frank A. Connolly, 53, manager of the package division of Oakite Products, Inc., New York,



FRANK A. CONNOLY

died suddenly at his home in New York City, Dec. 3, after being taken ill at his office earlier in the day. Regarded by many as one of the outstanding merchandisers of household cleansers, Mr. Connolly pioneered in mass displays of a single product in windows and interiors of supermarkets. He was among 22 leaders in the food industry chosen to contribute to the book, "Food Marketing," published in 1950. Mr. Connolly wrote the chapter, "Merchandising, the Coordinator." He had been with Oakite for 25 years.

Shampoo Mfrs. Fund

Manufacturers of shampoo were urged by the Toilet Goods Association recently to contribute to the Shampoo Manufacturers' Freight Group, which is seeking to obtain lower freight rates for shampoo shipments. The Shampoo Manufacturers' Freight Group is headed by John H. Breck, Inc., Springfield, Mass. The group was organized jointly by members of the Toilet Goods Assn. and the National Beauty and Barber Manufacturers' Assn. Through its attorney, Robert De Kroyft, the

group has petitioned the Interstate Commerce Commission for the more favorable rates applicable to soaps and cleansers, for shampoos and hair cleaner products. A hearing on the proposal will be held in Cincinnati in the near future, at which time Mr. De Kroyft will appear and argue for the position that shampoos are in fact cleansing agents and are entitled to the same freight rates as other cleansing agents.

The T.G.A. has estimated that the total cost of the proceedings in which the shampoo manufacturers will engage will be around \$15,000. To date, approximately \$3,000 has been collected. Checks payable to the "Shampoo Manufacturers' Freight Group" may be sent to the organization's treasurer, Harold F. Bertrand, 41 Florence Ave., Hempstead, N. Y.

New Offset Detergent

The development of a new type dampner roller detergent for cleaning offset lithography rollers was announced recently by Anchor Chemical Co., Brooklyn.

Packagers Elect Balkema

E. H. Balkema, head of the printing department of Colgate-Palmolive Co., Jersey City, N. J., was recently appointed chairman of the technical operations committee of the Packaging Institute, New York. As such, Mr. Balkema, who has been active in the affairs of the Institute for some time, also serves as general chairman of all technical committees. Also active in the Institute and chairman of its production division is John A. Warren of American Home Products Corp., New York. Mr. Balkema is also serving on the program committee for the 16th annual forum of the group, which is to be held at the Hotel Roosevelt, New York, Oct. 25-27, 1954.

Atlantic Names Bonine

The appointment of Charles E. Bonine as manager of chemical product sales of Atlantic Refining



CHARLES E. BONINE

Co., Philadelphia, was announced recently. He succeeds John M. Hoerner, who recently was named to the newly created position of chemical division director of purchases and sales of Armour & Co., Chicago.

Mr. Bonine joined Atlantic in 1941 as a chemical engineer in the research and development department, the year following his graduation from Princeton University. Prior to his present appointment he served as home office sales manager of chemical product sales.

Favors Coconut Tax Repeal

A recommendation favoring legislation eliminating the processing tax on coconut oil imported from the Philippine Islands is the result of 17 months' study and debate between two committees of the San Francisco Chamber of Commerce, it was announced recently. The recommendation came as a result of agreement between the chamber's Agriculture and World Trade Committees. The basic question involved was whether the three cents a pound tax, established in 1934 when coconut oil was widely used

*The Officers and Directors of
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7481 Shamrock La.

Toronto, Canada
R. M. Ferguson & Co.
81 Dunedin Dr.

in the manufacture of margarine, still is necessary to the welfare of the U. S. dairy industry.

— ★ —

GAF Advances Meigs

Appointment of Frederick M. Meigs as assistant general manager of foreign operations of General Aniline and Film Corp., New York, was announced recently by Jack Frye, the company's president. Dr. Meigs joined General Aniline in 1942 after service with E. I. du Pont de Nemours & Co., Wilmington, Del., over a period of twelve years. Previous to his new appointment Dr. Meigs was director of General Aniline's development department. J. H. Hildring who was recently elected senior vice-president will continue for the present to serve as general manager of foreign operations.

— ★ —

Solvay Plant in Moundsville

Start-up of chlorine-caustic soda operations at the new Perkins plant (Moundsville, W. Va.) of Solvay Process Division, Allied Chemical & Dye Corp., New York, was announced recently. The plant, Solvay's first operation in the Moundsville area, utilizes salt from the deposit located under the property as the raw material in its chemical production. The new Solvay installation provides employment for approximately 125 people.

A plant for the production of chlorinated methane products is now being built by Solvay at Moundsville and is expected to go into operation during the summer of 1954. Chlorine for this project will be supplied by the new chlorine-caustic soda plant.

— ★ —

Moves Chicago Office

Van Ameringen - Haebler, Inc., New York, recently moved its Chicago office to larger quarters at 201 North Wells Street, Suite 706. Appointment of Richard Barry as a sales representative operating from the new office was announced at the same time. Mr. Barry joined the firm after 17 months of service in the Korean theatre of war.

Colgate Names Two

Two appointments in the soap department of Colgate-Palmolive Co., Jersey City, N. J., were



F. W. REIF

visor of northeastern Pennsylvania. He also served as district manager in both Birmingham and Richmond, and as divisional manager in At-



MICHAEL FRAWLEY

announced recently by Marshall Lachner, manager of the department. Frank W. Reif has been appointed as soap department sales manager and Michael P. Frawley as assistant sales manager.

Mr. Reif, who joined the company in 1919, had been divisional manager of the soap department's New York division. A native of Scranton, Pa., he worked his way up from displayman to salesman to assistant district manager to super-

lanta.

Mr. Frawley, after attending Holy Cross College and Northeastern University, joined Colgate as a salesman in 1932 in the Springfield, Mass., district. Later he was named supervisor of the district, supervisor of the Boston district, home office supervisor and New York divisional supervisor. Mr. Frawley later served as Baltimore district manager and as home office merchandising manager.

Rohm & Haas Makes Sodium Lauryl Sulfate

The availability of sodium lauryl sulfate in two forms, paste and low-salt liquid, was announced recently by Rohm & Haas Co., Philadelphia. The two newest additions to the firm's line of detergent chemicals are manufactured by Rohm & Haas in its Bridesburg, Pa., plant, utilizing fatty alcohols produced in the company's plant near Houston, Tex. Previously the firm made fatty alcohols from coconut oils and tallow as raw materials for other products. Recent expansion at the Texas plant made available a supply of lauryl alcohol, which, when sulfated, produces lauryl sulfate.

The liquid sodium lauryl sulfate is being marketed under the name "Triton AS-30," and the paste is designated "Triton AS-35." Both are supplied in drum and tankcar

quantities. Both products are suggested for use in household detergents, shampoos, high-foaming industrial cleaners and cosmetics.

Rohm & Haas' decision to manufacture sodium lauryl sulfate, according to D. S. Frederick, vice-president, was predicated on the company position as a producer of lauryl alcohol. There are only three such producers in the U. S.

— ★ —

Andersson Joins Finetex

William Andersson, Jr., recently joined the technical sales staff of Finetex Inc., Pompton Plains, N. J. Mr. Andersson had resigned earlier from Colloids Inc., Newark, N. J., after 15 years with the firm during which time he had been an officer and a member of the board of directors.



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Tombak Forms Reynaud.

George J. Tombak, associated with the aromatics section of E. I. du Pont de Nemours & Co.,



GEORGE J. TOMBAK

Wilmington, Del., for the past 20 years, recently announced the formation of Reynaud, Ltd., of which he is president. The new company, which is located at 355 W. 52nd St., New York City, is making available a full line of essential oils, natural floral oils, perfume compounds, aromatic chemicals, flavors and specialties. The firm headed by Mr. Tombak is the sole representative in the U. S. for H. Reynaud et Fils, French suppliers, who handle French, French-Colonial, Spanish and essential oils from the Far East.

Mr. Tombak, who has worked extensively in the perfuming of soaps and detergents, had a part in the development of many of the popular soap perfumes. He is a member and past president of the American Society of Perfumers, former chairman of the aromatic chemical committee of the Essential Oil Association of the U.S.A. and a member of the Society of Cosmetic Chemists.

— ★ —

Bernard Ungerer Rep.

The appointment of Rene Bernard as director of management and research for the new Paris office of Ungerer & Co., New York, and Vidal-Charabot, was announced recently by Ungerer. M. Bernard has been with Lentheric Inc., since 1928, when he joined the firm as its

technical director and perfumer in Paris. In this capacity he established branches in the U.S.A. and in most European countries. Later he came to New York as director of research and development for Lentheric, a position he has held up to the present. M. Bernard will leave for Paris late this month. Prior to his departure he is dividing his time between Ungerer's New York office, its factory and laboratories familiarizing himself with the company's policies and products.

— ★ —

Prichard Leaves U.S.D.A.

The resignation of George L. Prichard as chief of the fats and oils branch of the Commodities Stabilization Service, U. S. Dept. of Agriculture, Washington, D. C., to join the Bureau of Raw Materials of the American Vegetable Oils and Fats Industry, Washington, D. C., was announced late last month. Mr. Prichard becomes assistant manager of the Washington office of the Bureau, which is managed by John Gordon.

At the same time it was announced that Mrs. Yvette Bergeron has also become associated with the Washington office of the Bureau. Formerly she was licensing officer in the Office of International Trade, in which capacity she was responsible for licensing exports of fats and oils, oilseeds, some vegetable products and all animal products to Hong Kong.

GEORGE L. PRICHARD



Addoms Niagara Chief Eng.

Hallett B. Addoms was recently appointed chief engineer of Niagara Alkali Co., Niagara Falls,



HALLETT B. ADDOMS

N. Y., succeeding William C. Brooks, who is retiring. Mr. Brooks will be retained as a consulting engineer for the company.

Mr. Addoms came to Niagara from Hercules Powder Co., Wilmington, Del., in 1945. Since then he has been connected with development, operation and engineering.

Fatty Acid Research

The establishment by the Fatty Acid Division of the Association of American Soap & Glycerine Producers, Inc., of a fellowship in the U. S. Department of Agriculture for research on fatty acids derived from domestic fats and oils was announced recently. The project is part of the U.S.D.A.'s research program aimed at finding new uses and greater profits for fats and oils. The study is to be directed particularly at broadening the industrial application of fatty acids, which comprise 90 percent of the weight of U. S. fats and oils.

Under terms of the grant sponsored by the Fatty Acid Division of AASGP, senior and junior fellowships are provided for and extend for one year. It may be renewed by mutual agreement. The research will be supervised by the Agricultural Research Service's

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LIQUID SOAPS

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SHAMPOOS

TOILET SOAPS

ETC.

SOAP and SANITARY CHEMICALS

Eastern Regional Research Laboratory in Philadelphia, where the work will be done.

Increased production and reduced consumption of fats and oils in the U. S. in recent years has brought about mounting surpluses of these products, the U.S.D.A. stated, in announcing the project. The problem is especially acute for animal fats. Surplus animal fats amounted to about 700 million pounds in 1952. To utilize these increasing supplies, new uses for fats and oils must be found that will create new and larger markets.

Special emphasis will be placed on research work which may eventually lead to new industrial outlets for fats and oils in the research program which has been undertaken at the Philadelphia laboratories. As a result of such work, markets for domestic fats have been opened up in such diverse fields as plasticizers, hot-dipped tinning, synthetic rubber manufacture and animal feeds.

The fellowship will augment substantially the present research on fats and oils at the Eastern Regional Research Laboratories, particularly as it applies to fatty acids and possible modifications or derivatives of fatty acids.

— * —

Green to Strong, Cobb

Harold C. Green, eastern divisional sales manager for L. Sonnenborn Sons, Inc., New York, for 21 years, recently resigned to become eastern divisional sales manager of Strong, Cobb & Co., Cleveland, and its subsidiary, American Chlorophyll Division, Lake Worth, Fla.

— * —

Cos. Chems. Hear Goodyear

Dr. George H. Goodyear, midwest district sales manager of Glyco Products Co., Brooklyn, was to speak on the "Use of Chelating and Sequestering Agents in Cosmetics," at the Jan. 12 meeting of the Chicago Chapter of the Society of Cosmetic Chemists. The dinner meeting was to have been held at Henrici's restaurant in the Merchandise Mart.

Eversley Childs Dies at 87

EVERSLEY Childs, 87, chairman of the board and co-founder of Bon Ami Co., New York, died at his home in New York City, Dec. 20, after a short illness. He was also president of Orford Soap Co., Hartford, Conn., manufacturing subsidiary of Bon Ami.

A native of Brooklyn, he had been active in the development and management of the Bon Ami Co. for more than 60 years. With his father and a cousin of his father's, Mr. Childs helped to found Bon Ami Co.

A native of Brooklyn, he began his business career as an office boy with Mica Roofing Co., Brooklyn, which had been owned by his father. Later he became president and owner.

When Mica was purchased by Barrett Co., New York, Mr. Childs became an executive and director of the latter concern, eventually becoming president. With the purchase of Barrett Co. by Allied Chemical and Dye Corp., New York, Mr. Childs continued as a director and later chairman of Barrett.

A son, Eversley Childs, Jr., a director of Bon Ami Co., and a real estate broker, died Oct. 29, 1952.

Mr. Childs was a financial backer and director of Technicolor,

Inc., and Technicolor Motion Picture Corp. He formerly held directorships in Congoleum Co. and Boorum & Pease, stationery manufacturers.

With the late Gen. Leonard Wood, Mr. Childs helped to establish the Childs Leprosarium at Sebu, Philippine Islands, which was named in his honor. He had served as chairman of the board of the Leonard Wood Memorial and headed a committee to raise funds to aid the general in fighting leprosy. Long an active supporter of the Salvation Army, Mr. Childs, with his late son, gave the Army 34 acres of land and buildings in Setauket, N.Y., in 1942, to establish a children's home.

Surviving are his widow, Alice Barnard Childs; a grandson; and three granddaughters.

— * —

Chi. Cos. Chems. Elect

William Lieb of Allen B. Wrisley Co., Chicago, was elected recently as chairman-elect of the Chicago chapter of the Society of Cosmetic Chemists. Robert Appenzeller of G. Barr & Co., was elected secretary. Other officers include: chairman, Dr. William Colburn of Colburn Laboratories, Inc., and Dr. Harold Davidson of Jules Montenier, Inc.

Newly elected officers of the Chicago Chapter of the Society of Cosmetic Chemists are left to right: Mr. Appenzeller, Dr. Davidson, Mr. Lieb and Dr. Colburn.



PINE OIL

for soaps, cleaning compounds, disinfectants
SMELLS CLEAN... CLEANS CLEAN



HERCULES POWDER COMPANY

INCORPORATED
Naval Stores Department, 961 Market Street, Wilmington, Delaware

SOAP and SANITARY CHEMICALS

Fritzsche Has Best Year

Fritzsche Brothers, Inc., New York, had the most successful period in its 82 year history, the firm announced during its annual four-day staff meeting, held at the Hotel New Yorker, last month. Representatives of the sales, executive and technical divisions participated in the four day sessions, which were opened with an official welcome by F. H. Leonhardt, chairman of the board. The meeting was also addressed by John H. Montgomery, president.

In addition to group luncheons on each day of the meeting, other highlights included visits to the company's headquarters and a cocktail reception and buffet supper in the Garden Room of the Hotel Ambassador.

Fritzsche executives, on the first day of the meeting, discussed matters concerning each division of management and their relationship to sales. The future program and past accomplishments of the perfume division occupied most of the second day of the meeting for members of that department. Visits to Fritzsche headquarters in the Port Authority building and the cocktail party, reception and buffet highlighted the third day's events. The final day of the meeting was devoted to a discussion of the opera-



Executives and representatives attending recent annual staff meetings of Fritzsche Brothers, Inc., New York: Front row (l. to r.) M. J. Niles, Stanley Crouch, Franz Barada, president John H. Montgomery, chairman of the board F. H. Leonhardt, vice-president Joseph A. Huisking, Charles Schneider, and Warren R. Godfrey; middle row — Russell Bull, George Schmidt, T. Fred Baker,

Jr., Ralph Whicher, Leslie Joyner, Frank McNamara, Robert Hughes, Frank Stebbins, Carl Edwards, Ian MacInnes and Blaine Crouch; back row—Ralph Arsenault, Walter Eller, Stanley Schuster, Lloyd Speck, Norman Jones, Arley Griffith, George Fellows, John Brickner, Parker Schwamb, James Shumaker and Gerard D'Amico.

tions of the flavor department.

— ★ —

CSC Adds to Sales Force

Three new appointments to the sales staff of the industrial chemicals division of Commercial Solvents Corp., New York, were announced recently.

Dean J. Kutchera, assigned to the Detroit district office, was formerly with Lennen and Newell, Inc., New York. Wallace N. Davis,

Photo taken during buffet supper at Hotel Ambassador during the annual Fritzsche sales meeting.

located in the Chicago district office, was previously employed by Wilson & Co., Chicago. James F. McCarthy, also assigned to the Chicago area, has been a salesman with Wyeth, Inc., Philadelphia.

— ★ —

P&G Cuts Shortening

Bulk shortening prices were reduced one cent a pound, effective Dec. 12, by Procter & Gamble Co., Cincinnati, it was announced recently.



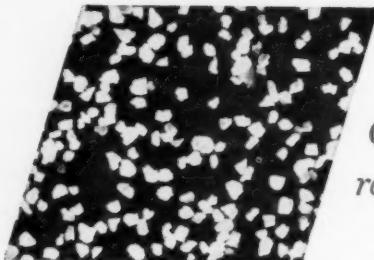
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Garages



Bakeries



Metal Cleaners



Heavy Duty mechanical
dish-washers



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equipment



In the textile industry



Water treatment to
prevent corrosion

General Chemical's hydrated Sodium Metasilicate has long been recognized in the field of heavy duty detergents as a quality product, particularly suited to applications requiring an alkaline detergent which is extremely effective without being unduly corrosive.

General's new Anhydrous Metasilicate, like the hydrated product, is of exceptionally high quality. Behind it stands all of the experience the company has gained in half a century as a leading producer of Sodium Compounds.

It is produced as a free-flowing, white, granular material; screen size—all through 10 mesh, 1% maximum through 100 mesh. It is packed in 100 and 400 pound drums, and 100 pound bags.

For your requirements, consult the nearest General Chemical office listed below.

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In Wisconsin: General Chemical Company, Inc., Milwaukee
In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

Verley Ups Stephenson

The advancement of James H. R. Stephenson to the position of manager of sales of the aromatics



J. H. R. STEPHENSON

manufacture of Verley Chemical Co., Newark, N. J., a wholly owned subsidiary of Albert Verley & Co., New York, was announced recently by E. J. Strobl, president of Albert Verley & Co. Mr. Stephenson joined Verley early last year, having previously been with Givaudan-Delawanna, Inc. and Aromatic Products, Inc., both New York. Earlier he had been with Colgate-Palmolive-Peet Co., Jersey City, N. J.

New Hooker Chemists

The addition of two new members of the research and development department of Hooker Electrochemical Co., Niagara Falls, N. Y., was announced recently by Dr. J. H. Brunn, director of research and development. The two chemists, who will join the resins and plastic group of Hooker's research and development department, are Dr. Samuel J. Nelson and John E. Wier.

Dr. Nelson, who was previously with U. S. Rubber Co., New York, and Atlantic Refining Co., Philadelphia, received his doctorate in organic chemistry from Lehigh University in 1951. He received his B.S. in 1941 from Iowa State College and his M.S. from Brooklyn Polytechnic Institute in 1946.

Mr. Wier is a graduate of

Canisius College, Buffalo, where he received his B.S. in chemistry in 1939. He served with the U. S. Army from 1941 to 1946, after which he was a general physical scientist in the organic plastics section of the National Bureau of Standards in Washington, D. C.

DCAT Names Committees

Stanley I. Clark of Sterling Drug, Inc., New York, chairman of the Drug, Chemical & Allied Trades Section of the New York Board of Trade, recently completed the appointment of the standing committees of the DCAT for the 1953-1954 fiscal year. Chairman and the committees they head include: W. Boyd O'Connor, Ayerst, McKenna & Harrison, Ltd., auditing; F. M. Schwemmer, Ruthrauff & Ryan, Inc., bulletin; William W. Huisking, Chas. L. Huisking & Co., coordination; Hugh S. Crosson, McKesson & Robbins, Inc., finance; James G. Flanagan, S. B. Penick & Co., legislative; Ralph A. Clark, J. T. Baker Chemical Co., luncheon greetings; S. N. Stokes, Merck & Co., membership; J. David Hayden, R. P. Scherer Corp., membership maintenance; George S. McMillan, Bristol-Myers Co., publicity; Claud A. Hanford, Pharmaco, Inc., section activities; Harold F. Cummings, Vitamerica Oil Corp., time and place; Fred G. Singer, E. I. du Pont de Nemours & Co., tariff; Lloyd I. Volckening, Ivers-Lee Co., coordinator, trade association activities.

A luncheon meeting of the Board of Trade will be held Tuesday, Jan. 26, at the Hotel Commodore, New York. Dr. Theodore G. Klumpp, president of Winthrop-Stearns, Inc., New York, and president of the newly formed National Pharmaceutical Council will be the guest speaker. Fred J. Stock, newly elected president of the New York Board of Trade and vice-president of Mathieson Chemical Corp., Baltimore, will act as toastmaster. The annual dinner of the New York Board of Trade will be held at the Waldorf-Astoria Hotel, New York, Thursday, March 4.

Edward Bush Joins Rhodia

Edward A. Bush, for the past several months with Haug & Co., New York, recently joined



EDWARD A. BUSH

Rhodia, Inc., New York, as manager of aromatic sales. At the same time Rhodia announced that a plant in Paterson, N. J., for the manufacture of its line of aromatics and compounds was to have been ready for occupancy early this month. Rhodia, an affiliate of Rhone-Poulenc of France, recently acquired the aromatics and compound business of E. I. du Pont de Nemours & Co., Wilmington, Del.

Mr. Bush, who left the aromatics division of Dow Chemical Co., Midland, Mich., late last year to join Haug & Co. as vice-president and secretary, a distributor of enzymes and albumen, is the son of B. T. Bush, a well-known figure in the aromatics field, and head of the firm bearing his name, which was acquired by Dow in 1950. Mr. Bush was with his father's firm, Bush Aromatics, Inc., New York, prior to its sale to Dow, and went with the Dow organization following the acquisition. Earlier Mr. Bush had been with Hooker Electrochemical Co., Niagara Falls.

G. R. Parkinson Dies

George R. Parkinson, 52, head of Parkinson Co., Katonah, N. Y. manufacturers of perfuming materials and toiletries, died Nov. 30 at Mount Kisco, N. Y.

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**Your detergent scented with
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Give your powdered household detergents the odor-appeal that builds sales, wins consumer loyalty... with Tergescents, the fragrances specially developed for that purpose!

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TGA Scientific Section Meets

THE meeting of the scientific section of the Toilet Goods Association, held December 9 at the Waldorf-Astoria Hotel, New York, featured seven technical papers. The first speaker, A. L. Fishbach, Oxzyn Co., New York, discussed formulation, manufacture, and analysis of cologne sticks and included modifications to make insect repellent, deodorant, after shave, and sunscreen sticks, based on the same formula. These sticks are prepared by the gelling action of sodium stearate on alcohol, with the addition of plasticizers, perfume oils or other active ingredients, and color. Two methods may be used: one employs previously prepared sodium stearate, the other prepares sodium stearate as part of the process.

Toxicologic observations on surface-active agents were the subject of a paper by J. K. Finnegan and J. B. Dienna, Medical College of Virginia and Rohm & Haas Co., Philadelphia, respectively. A group of widely used synthetic wetting agents, emulsifiers, detergents, and antiseptics of the anionic, nonionic, and cationic type was examined toxicologically. Experimental studies of oral toxicities were performed in rats, of skin toxicities in both rabbits and human subjects. Eye irritation was demonstrated by two technics on the mucous membrane of the rabbit eye. Results of these experimental series were given in detail. Their interpretation leads to the conclusion that cationics are the most toxic type of surface active agent. Other broad generalizations concerning the toxicity of these compounds were not made.

Shampoo studies on human hair clippings show that synthetic detergent shampoos clean the hair without removing excessive amounts of oil, according to a paper by V. C. Ester, H. Henkin, and J. M. Longfellow, Colgate-Palmolive Co., entitled "The Use of Hair Clippings in the Evaluation of

Shampoos." Laboratory tests employing a modification of the Barnett and Powers method, in which human hair clippings are shampooed instead of standard wool, were performed with two different shampoos: one a clear liquid containing the ammonium salt of sulfated monoglycerides of coconut fatty acids,

(Turn to Page 169)

D&O Holds Sales Meeting

Sales personnel from nine branches located throughout the U. S. attended the recent national sales meeting of Dodge & Olcott, Inc., Hotel New Yorker, N. Y. The greater part of the program was devoted to talks, discussions, and demonstrations by the technical personnel, designed to inform the sales staff

on the progress made during the past year in expanded laboratory service and product development. During the perfume sessions, fragrances for cosmetics and industrial odorants were discussed by August Schwindeman, aerosol perfuming by Herbert Kainik, French perfumery by Mysie Emmet, household deodorants by Jim Puglis, and general topics by John Lyons. Various aspects of the flavor field were presented by Claude Johnstone, Jack Hohhof, Willem Lasthuyzen, Frank Pond, and Charles Dwyer. F. H. Leonhardt, Sr., chairman of the board; John L. Cassullo, president; V. H. Fischer, vice president; F. H. Leonhardt, Jr., secretary and vice president; Jules Bauer, coordinator of sales; Ruth Farnsworth, advertising manager; and Paul Sperry, sales manager, spoke on administration and organization.

D & O sales personnel at convention: Bottom row, l. to r.: Bill Gray, Chicago; Ed Spellman, New York; Ed Wyluda, Boston; Frank Murdock, San Francisco; Al Birsner, Philadelphia; Earl Kersten, Atlanta; Lou Mignacca, New York; Paul Sperry, sales manager; George Collins, St. Louis; K. Hartley, Chicago; and Tom Callahan, Cincinnati. Top row, left to right: Chet Smith, Los Angeles; Bob Heidt, New York; Joe Fortescue, Philadelphia; J. O'Mara, Boston; Bill Arko, Chicago; Jack Melody, New York; Jules Bauer, sales coordinator; Fred Perrone, New York; John Gallagher, New York; Jim Dugan, Boston; Neil Grace, Los Angeles; H. Bachmann, St. Louis; and John Thompson, Toronto.

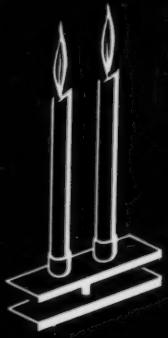


Left to right, Members of D & O's perfume department who spoke: John Lyons; Jim Puglis; Gus Schwindeman; Mysie Emmet; Herb Kainik; Tony Balchus; and John Morrell.





A New Light on Stearic Acid



Candles burn cleaner when made with a Stearic Acid of low ash content. Century Brand Stearic has the lowest ash content of any on the market today. Careful selection of raw materials and care in processing make Century Brand Stearic Acid the best for candles.



Stearic Acid Esters are whiter when made with Century Brand Stearic Acids because of their exceptional heat stability. Glycerol Monostearates with colors of 5 Yellow and 1.0 Red (5 1/4" Lovibond) have been produced with Century 1220 Double Pressed Stearic Acid without bleaching.



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For these and other uses there is a grade of Century Brand Stearic Acid to meet your requirements.

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Reports on S. A. Essential Oils

DR. Ernest Guenther, vice-president and technical director of Fritzsche Brothers, Inc., New York, recently left for a two months trip to Europe, where among other things he will lecture in Rome before a scientific group and later address the Societe de Chimie Industrielle in Paris.

Having recently returned from a four months' survey of South American essential oil production, Dr. Guenther had the following observations to make about significant developments he noted on his Latin American trip:

Essential oil production by underprivileged and under-developed countries appears to be coming to an end. This is especially true throughout South America where the wages and standards of living are on the upswing. These two factors will eventually mean higher prices for essential oils in Dr. Guenther's opinion.

When visiting South America, one is made to feel increasingly aware of the fact that the essential oil industry is composed of two parts. One, the technical phase, which includes distillation, manufacturing, etc., and secondly, the agricultural aspect, which has often been sadly neglected. A striking instance of this latter is observed in a country such as Brazil, which offers a great variety of favorable climate and soil conditions and, yet, these do not necessarily mean that essential oils can be produced there advantageously. The reason for this being that other crops such as coffee, rice and foodstuffs, offer far greater profits to growers who, today, can be persuaded to produce essential oils only if long range contracts can be made at favorable prices. At present essential oil production is too risky. There are too many price fluctuations to make it of interest to growers. In addition, before growers can produce essential oil crops successfully they must acquire the necessary "know-how."

This means years of learning and gaining experience and, not infre-



DR. ERNEST GUENTHER

quently, considerable loss of money invested

These conditions point ultimately to price increases in Dr. Guenther's opinion. Citing Guatemalan citronella and lemongrass oils as examples, he points out that this industry is in a bad position because of low-price offerings from Asia. In some cases prices are actually below those of the cost of production. Citronella oil is still coming from Formosa, but should political difficulties develop, users might again have to look to Guatemala for their supplies. Similarly with patchouly oil, which would be adversely affected should trouble develop in Sumatra. Production of patchouly is now getting underway in Brazil, but not with the Coolie labor, as is the case with the Sumatra oil. The Brazilian oil is being produced under advanced conditions of agriculture and labor, all of which means costlier production and more expensive oils.

The cheaper interior lands of South America might attract future essential oil development, but in such regions there is difficulty in finding suitable manpower. To the average laborer and his family, becoming more and more accustomed to the advantages and conveniences

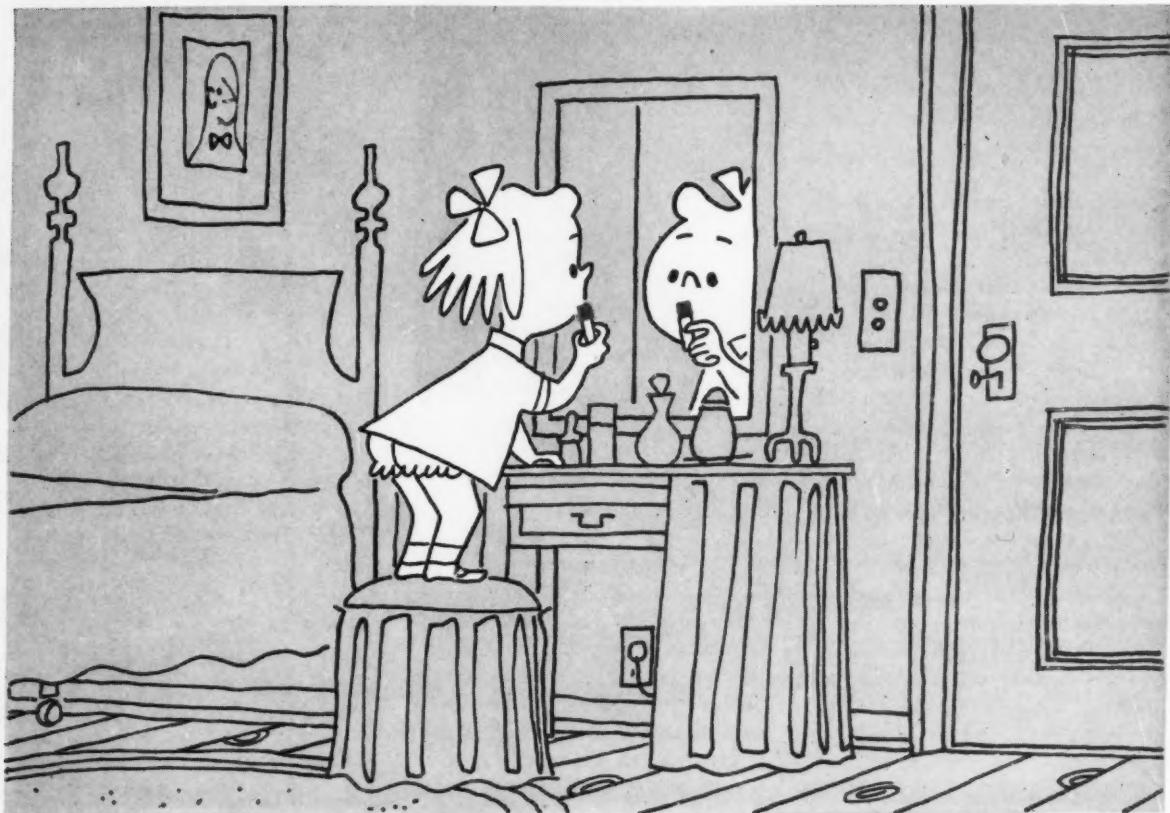
of city life, the primitive conditions of any pioneering interior development are not too attractive. Housing, sanitation, schools, readily available supplies of food and many of the other needs of modern living would have to be provided to induce labor in sufficient numbers to give up ready jobs and good wages in South America's booming metropolitan areas for the more restricted life of the agricultural interior. Such undertakings would entail large capital investments and could only be justified by the prospect of much higher prices for essential oils than now prevail. Most of the oils now produced in Brazil, such as orange, lemon, eucalyptus, patchouly, vetiver, citronella and lemongrass, are consumed within Brazil. These oils are sold there at higher prices than the same oils are now bringing in the world markets.

During his trip Dr. Guenther visited Mexico, Guatemala, Panama, Chile, Argentina, Brazil and parts of the West Indies.

Book on Paint

What You Should Know About Paint by E. M. Fisher, *National Painters Magazine*, New York, 4 3/4 by 6 3/4 inches, cloth, 184 pages, price \$2.50. The purpose of this book, according to its preface, is the interpretation of basic paint chemistry and terminology to the paint salesmen, dealers, and contracting painters who have had no technical training, and to the consuming public. It is also designed to serve members of other industries who are engaged in selling paint making materials. The contents of this little volume were originally published in serial form in the *National Painters Magazine*. The author was a paint chemist before joining the staff of *National Painters Magazine* and *Oil, Paint and Drug Reporter*. Apart from his own experience he was able to draw upon the reports of the Scientific Section of National Paint, Varnish, and Lacquer Association, and of the Federation of Paint and Varnish Production Clubs, and other sources.

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**HOW
CAN
POTASSIUM
SILICATES
HELP
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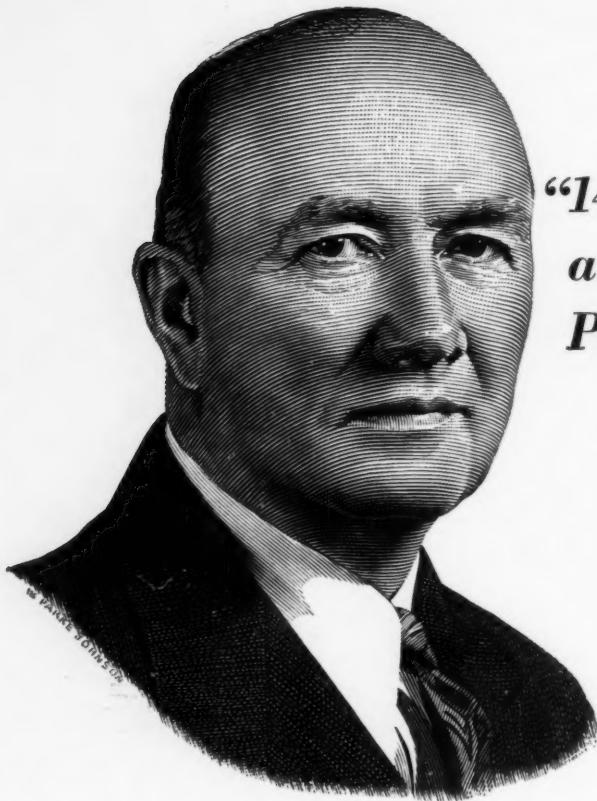
For liquid or paste potash soaps, Kasil Potassium Silicates are efficient detergent allies. They increase the sudsing ability of these soaps, they effectively suspend soil, and then prevent the re-deposition of removed soil. Unlike sodium silicates the use of Kasil builders in liquid or soft paste soaps does not materially alter their viscosity.

In sodium soap, the addition of Kasil Potassium Silicate partially converts it into a potash soap. Increased solubility and rate of solution as well as improved sudsing result without the possibility of salting out.



Let us send the supporting details on Kasil detergent values. Ask for publication, "Potassium Silicates in Soaps."





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- the average monthly investment of a U. S. Steel Payroll Saver is \$20.79.
- every month, these 144,000 employees invest \$2,993,760 in personal security—and America’s economic stability.
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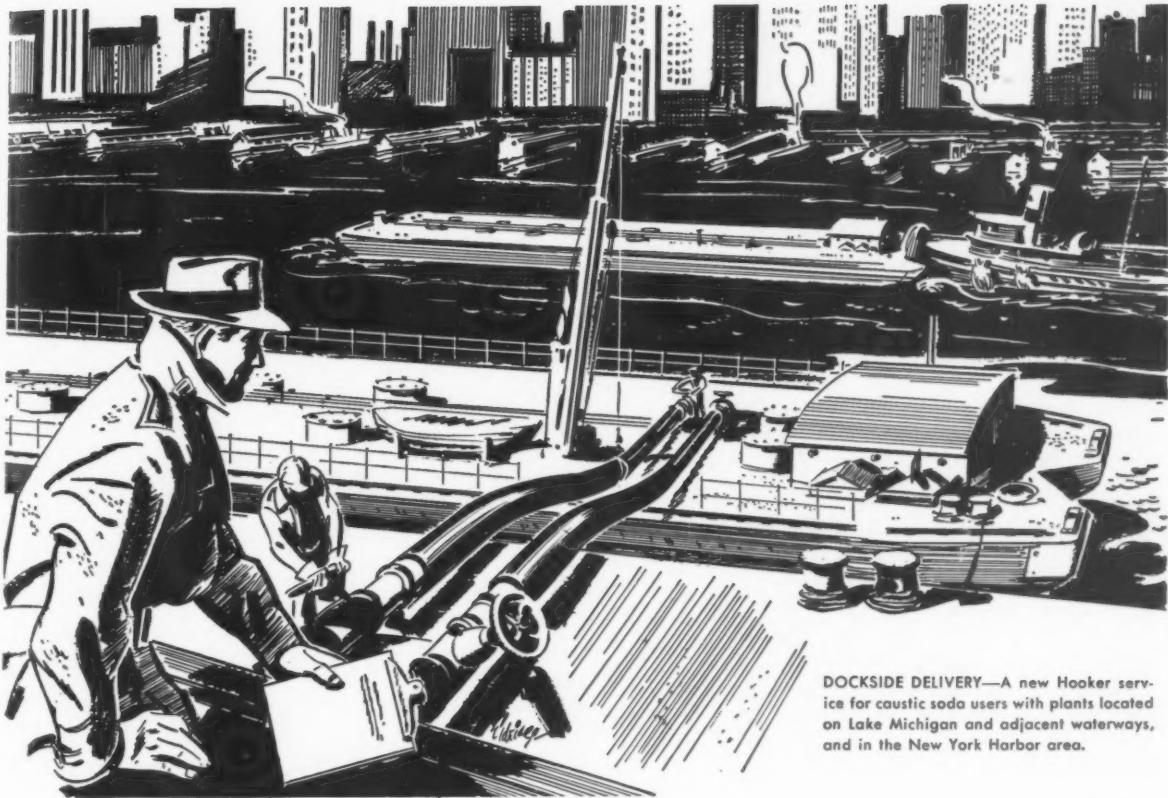
thousand companies, large and small, are building personal security and contributing to national economic stability by their \$160,000,000 monthly investment in U. S. Savings Bonds. These Payroll Savers, with their \$25 and \$50 Bonds, are major shareholders in a huge reservoir of future purchasing power—the \$35.5 billion, cash value of Series E Bonds outstanding.

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STANDARDIZE on Hooker Caustic Soda

Why this is important to you:

With *uniform* caustic soda coming in, shipment after shipment, you can standardize your caustic handling and processing.

You need not adjust your process to meet variations in incoming caustic shipments. You can be sure each new shipment matches your current inventory.

You get this kind of uniformity with Hooker Caustic Soda. Every step in the manufacture—from salt brine to tank car—is controlled at Hooker, by Hooker. More than 20 separate inspections and analyses safeguard the uniformity of the Hooker Caustic you buy.

This is one reason why leaders

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Hooker uniformity can pay off for you, too—in lower operating costs and smoother, better processing. Try it and see. A letter or phone call to the nearest Hooker office will bring you product data and contract information.

Buy the UNIFORMITY Hooker Caustic Soda gives you

Forms: Liquid 50% and 73% • Flake • Solid • Special fine flakes

Containers: Tank cars • Tank wagons • Barges • Drums

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From the Salt of the Earth—

HOOKER ELECTROCHEMICAL COMPANY

HOOKER ELECTROCHEMICAL COMPANY

Buffalo Ave. & Union St., Niagra Falls, N. Y.

Please send data sheets on Hooker Caustic Soda; Bulletin 100 describing Hooker products and services.

Name..... Title.....

Company.....

Address.....

City..... Zone..... State.....



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This man, typical of the Mathieson Technical Service Staff, is experienced on an industry-wide basis in the handling and use of industrial chemicals. Every day, as a trip with a Mathieson Technical Service Man would show, brings up new problems on which his broad experience is invaluable. For example:

A paper mill in New England is visited and advised on super-bleaching with chlorine dioxide. A soap manufacturer in the Middle West wishes to discuss the advantages of low-iron caustic. A chemical plant in the East is counseled on the storage and handling of sulphuric acid. Several Southern textile mills are visited in connection with the storage of soda ash. A gray-iron foundry in Ohio is advised on controlling sulphur with Purite. A glass plant in the Southeast wants information on soda ash and nitrate of soda. A petroleum refinery in the Southwest seeks assistance on the handling of caustic soda, and several water works are advised on taste and odor control with chlorine dioxide.

And so it goes. More and more, industry is looking to Mathieson Technical Service for practical assistance on the handling and use of basic chemical raw materials. A call to your Mathieson representative is all that's needed to avail yourself of this industry-wide experience.



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*Mathieson Industrial Chemicals Division
Baltimore 3, Maryland*

2022

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dry ice and carbonic gas • ammonia • sodium nitrate • nitric acid
hydrazine products • sodium methylate • sodium chlorite • hypochlorite
products • sulphuric acid • ethylene glycols and oxide • methanol



Bids and AWARDS

Grit Soap Award

Newell Gutradt Co., San Francisco, won the award in a recent opening for grit soap by the Quartermaster Purchasing Agency, New York, with the following bids: item 1 b, 3.75 cents, and item 1 c, 3.8 cents.

GSA Soap Bids

Soap, group 1, 7,620 pounds; group 2, 4,245 pounds, alt. 11,865 pounds; delivered and origin respectively, was included in a recent opening for miscellaneous supplies by the General Services Administration, Chicago. Lowest bidders were Murro Chemical Co., Richmond, Va., with group 1, 41 cents and 37.7 cents; group 2, 41 cents and 37.7 cents; alt. 41 cents and 37.7 cents, and Pennsylvania Salt Manufacturing Co., Philadelphia, with groups 1 and 2 and alt., delivered only, 39.5 cents.

AF Award to Kleen Line

Kleen Line Corp., San Bernardino, Calif., won the award in an opening for oil absorbent sweeping compound by the Norton Air Force Base, San Bernardino, with a bid of 2.25 cents on item 6, and 1.95 cents on item 3.

QM Pesticide Award

In a recent opening for fungicide and insecticide by the Quartermaster Market Center, Oakland, Calif., Rohm & Haas Co., Philadelphia, won the award on item 1 with a bid of 63.6 cents, and Heckathorn & Co., Richmond, Calif., on item 2 with a bid of 32.3 cents.

GSA Bid for Cleaner

A recent opening for miscellaneous supplies by the General Services Administration, New York, included toilet bowl cleaner and naphthalene deodorant, item 1, 2,256 cans, item 2, 288 pounds, and item 3, 19,440 blocks. Murro Chemical Co., Portsmouth, Va., submitted the lowest bid of 12.8 cents on item 1;

Koppers Co., Tar Products Division, New York, the lowest bid of 15.25 cents on item 2; and American Chemical Co., Brooklyn, N. Y., the lowest bid of 6.2 cents on item 3.

Low Glycerine Bid

Vegetable Oil Products Co., Los Angeles, submitted the lowest bid of \$4.11 on 9,600 10-pound cans of glycerine in a recent opening by the Armed Services Medical Procurement Agency, Brooklyn, N. Y.

Sunlight Chem. Award

Sunlight Chemical Corp., Phillipsdale, R. I., won the award in an opening for water purification tablets by the Quartermaster Market Center, Chicago, with a bid of 3.5 cents.

Sweeping Compound Bid

Diamond Chemical Co., Maspeth, N. Y., submitted the low bid of 4.81 cents in a recent opening for 70,000 pounds of floor sweeping compound by the General Services Administration, New York.

Award to Economics Lab

The award on 15 barrels of detergent went to Economics Laboratory, Inc., Minneapolis, who submitted a bid of 8.1 cents per pound in a recent opening by St. Elizabeth's Hospital, Washington, D. C.

DDT Aerosol Bid

Tru-Pine Co., Chicago, and Chase Products Co., Maywood, Ill., submitted low bids of 45 cents on DDT aerosol units in a recent opening for miscellaneous supplies by the General Services Administration, Washington, D. C.

Low Hand Cleaner Bid

Hand cream cleaner, item 1, 1,680 jars, San Francisco; item 2, 60 jars, Boston; item 3, 3,270 jars, Denver; item 4, 516 jars, Fort Worth; item 5, 360 jars, Newark; item 6, 2,748 jars, San Francisco;

and item 7, 60 jars, Seattle, was included in a recent opening for miscellaneous supplies by the Federal Supply Service, New York. Low bids were submitted by Hillcrest Laboratories, Spring Valley, N. Y., as follows: item 1, 19.6 cents; item 2, 22.1 cents; item 3, 26.1 cents; item 4, 23.2 cents; item 5, 18 cents; item 6, 28.3 cents; item 7, 30.2 cents.

New Ethylene Oxide Process

A new process for the manufacture of ethylene oxide, which eliminates the use of chlorine and unites ethylene with air directly, was announced recently by Scientific Design Co., New York. The system has been put into successful commercial application for the first time at a plant in Lavera, France, designed by the American firm.

Offers New Release Agent

A release agent to prevent adhesives and other coating materials from adhering to the exposed surfaces of printing equipment was introduced by Potdevin Machine Co., Teterboro, N. J. A small amount of the product applied to the hands is said to prevent adhesive from sticking to the skin. The agent is trade-named "Release-Cote" and comes in quarts, gallons and five-gallon drums.

Penna Prisons Make Soap

Soap manufacturing is among new industries to be added in Pennsylvania's seven state penal institutions, it was announced recently by Arthur T. Prasse, state commissioner of correction.

Tallow-Based Syndet

"Igepon TE-42," claimed to be the first tallow-based synthetic detergent ever offered in commercial quantities was introduced recently by Antara Chemicals Division of General Dyestuff Corp., New York. This 26-percent active slurry form of "Igepon" costs 9½ cents. Technical data and samples of the new material are available.



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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany notice of opposition.

Hoosier Belle—This for laundry bleach and cleaner. Filed Feb. 27, 1952 by E. Bierhaus & Sons, Vincennes, Ind. Claims use since Dec. 1, 1951.

Glamothize—This for chemical compound in powder and crystal form for use in cleaning and mothproofing of rugs, carpets, and garments for personal use. Filed Feb. 18, 1953 by Dri-Wear Processing Co., New York. Claims use since March, 1952.

Ivanite—This for preserving and polishing wax for automobiles. Filed January 28, 1953 by Simoniz Co., Chicago. Claims use since July 14, 1938.

Plair—This for liquid air freshener. Filed May 14, 1953 by Henri Bendel, Inc., New York. Claims use since April 20, 1953.

Fullsan—This for general purpose liquid disinfectant. Filed May 19, 1953 by Fuller Brush Co., Hartford, Conn. Claims use since on or about October 27, 1952.

Fulmist—This for air deodorant. Filed May 19, 1953 by Fuller Brush Co., Hartford, Conn. Claims use since on or about April 30, 1952.

Russo—This for laundry detergents. Filed November 29, 1951 by Russell Chemical Co., Cleveland. Claims use since December 14, 1932.

Servac—This for acid type detergent and scale remover. Filed May 2, 1952 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since March 24, 1952.

Pronto—This for combination dye and cleaner for rugs. Filed July 30, 1952 by Aerosol Products Corp., Chicago. Claims use since April 16, 1952.

N-L Spot Cleaner—This for liquid cleaner for glass, wood and other surfaces. Filed October 28, 1952 by National Laboratories, Inc., Toledo, O. Claims use since September 18, 1952.

Iosan—This for liquid dairy detergent-sanitizer. Filed March 9, 1953 by Lazarus Laboratories Division, West Disinfecting Co., Buffalo, N. Y. Claims use since January 1, 1952.

Deterome—This for perfume

bases for liquid or powder detergents. Filed April 30, 1953 by Dodge & Olcott, Inc., New York. Claims use since February 14, 1950.

Perma Kleer—This for organic sequestering agent. Filed July 1, 1952 by Refined Products Corp., Lyndhurst, N. J. Claims use since August 1948.

LP—This for insecticides. Filed May 28, 1953 by Larvacide Products, Inc., New York. Claims use since on or about March 31, 1953.

idiot's delight—This for cleaner for stainless-steel copper pots and pans. Filed June 21, 1952 by Bropard Co., Rome, N. Y. Claims use since August 1, 1951.

Dugent—This for general purpose household detergents, soaps, etc. Filed September 18, 1952 by Industrial Soap Co., St. Louis, Mo. Claims use since July 2, 1947.

Zest—This for modified detergent in bar form for bath and complexion use. Filed October 17, 1952 by Procter & Gamble Co., Cincinnati, O. Claims use since July 15, 1952.

Hush!—This for preparation to clean and lubricate television tuners. Filed February 24, 1953 by Chemical Electronic Engineering, Matawan, N. J. Claims use since June 1, 1952.

Woodbury—This for bar soap. Filed August 15, 1953 by Andrew Jergens Co., Cincinnati O. Claims use since August 1952 on the mark as shown and since January 1, 1891 as to "Woodbury."

Botanaire—This for shampoo. Filed May 14, 1953 by Botany Mills, Inc., Passaic, N. J. Claims use since May 1, 1953.

"Absorb Grime Saves Time"—This for soap. Filed May 15, 1953 by French and Gilbert, Winchester, Ky. Claims use since December 29, 1947.

Bodysheen—This for liquid automobile cleaning and polishing compound. Filed May 16, 1952 by the Simoniz Co., Chicago. Claims use since March 31, 1952.

Luster-maid—This for abrasive cloth, metal scouring pads, and cloths. Filed September 24, 1952 by Benjamin Vine doing business as Haddon Products Co., Haddonfield, N. J. Claims use since June 1, 1952.

Wonder Gleam—This for metal polish. Filed April 13, 1953 by William Howard Manufacturing, Inc., New York. Claims use since December 1952.

Kopper Keeper—This for metal polish. Filed April 24, 1953 by Cameo Corp., Chicago. Claims use since April 15, 1953.

Steam-O-Dor Mist—This for a household deodorant. Filed May 31, 1951 by Rival Manufacturing Co., Kansas City, Mo. Claims use since May 22, 1951.

Neiradex—This for rinsing emulsions for fabrics. Filed March 3, 1953 by Neirad Industries, Inc., Darien, Conn. Claims use since November 7, 1952.

Lanoloc—This for shampoo. Filed November 13, 1952 by Rilling Dermetics Co., New York. Claims use since October 16, 1952.

Book on Foams

Foams: Theory and Industrial Applications by J. J. Bikerman, Reinhold Publishing Corp., New York, 345 pages, cloth, six by nine inches, price \$10. The chemical and physical properties of foam are studied in the first section of the book, which comprises about three fourths of the material. Foam formation, structure, drainage, and the mechanical, optical and electrical properties of foams are discussed in detail. The remaining chapters are devoted to the practical applications of foams in such fields as fire protection and froth or ore flotation. One chapter deals with chemical destruction of foams, so important in petroleum and lubrication technology. An extensive bibliography follows each chapter. The volume was written "for scientists who intend to profit by foam, or are plagued by it, and last but not least, are interested in foam just because foam is so interesting."

Fluoride, Oxalate in Soap

Hard-water or sea-water soap or soap-containing washing agents incorporate sodium fluoride or sodium oxalate in a form which dissolves prior to the soap, thus binding the cations of the substances causing the water hardness with formation of non-ionized or little-ionized products. Granular or coarsely powdered soap is mixed with a finely powdered soluble fluoride or oxalate, or granular soap is coated with a film of the soluble fluoride or oxalate. Proportions of the additive used depend upon degree of water hardness. Small quantities of such customary ingredients as alkali carbonates, silicates, phosphate and per-salts are permissible. British patent 656,248 N. V. Dibbleman.



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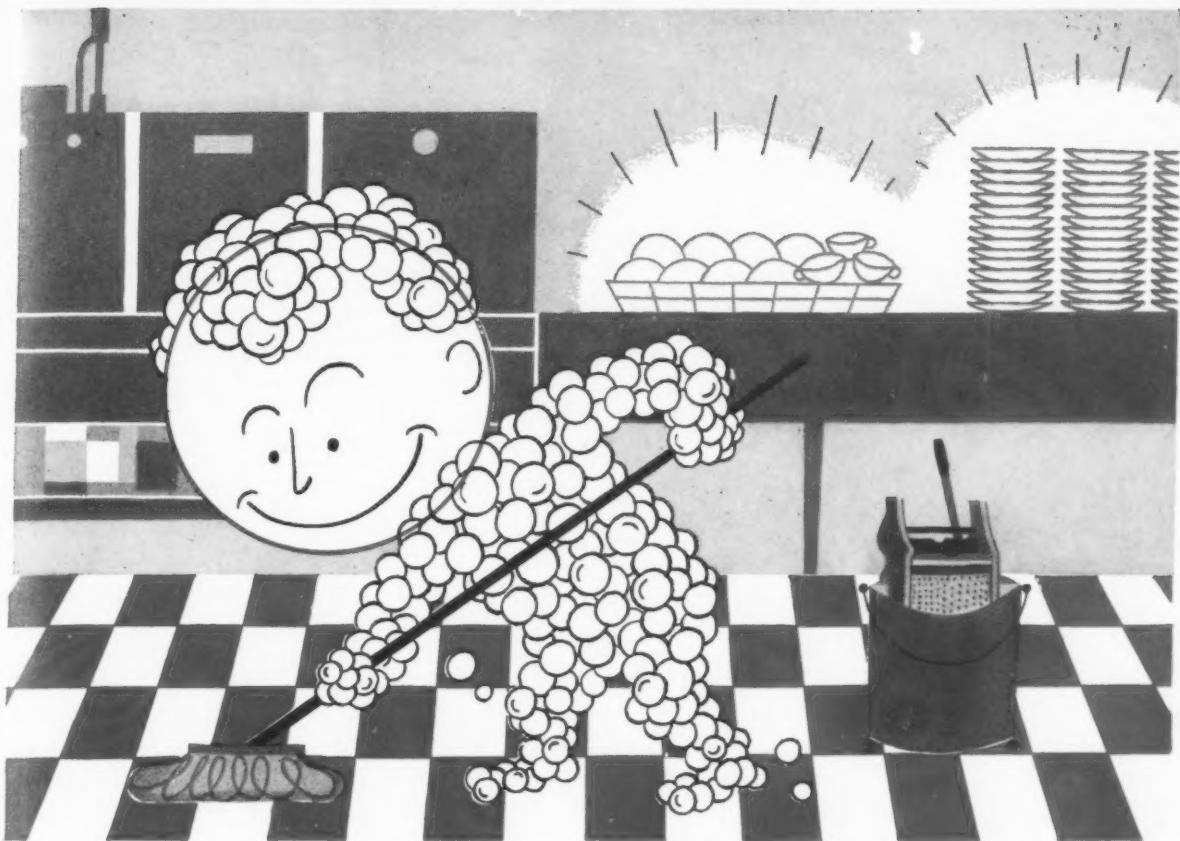
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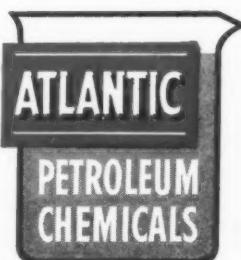
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Do-All is an already built synthetic detergent, an all-purpose anionic with high suds stability, excellent for dishwashing. It's popular with maintenance men for their many jobs—and you can easily compound it into specialized products. *Regal Beads*, a versatile anionic alkyl aryl sulfonate, can be used for almost any industrial job from dishwashing to car washing because of its high wetting, penetrating, and detergent properties.

**Big profits, too, in these hand soaps—
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Powdered Dial is Armour's famous bath and toilet soap in powdered form. Repackaged or as is, it's popular with industrial users and institutions because its Hexachlorophene gives germicidal protection.

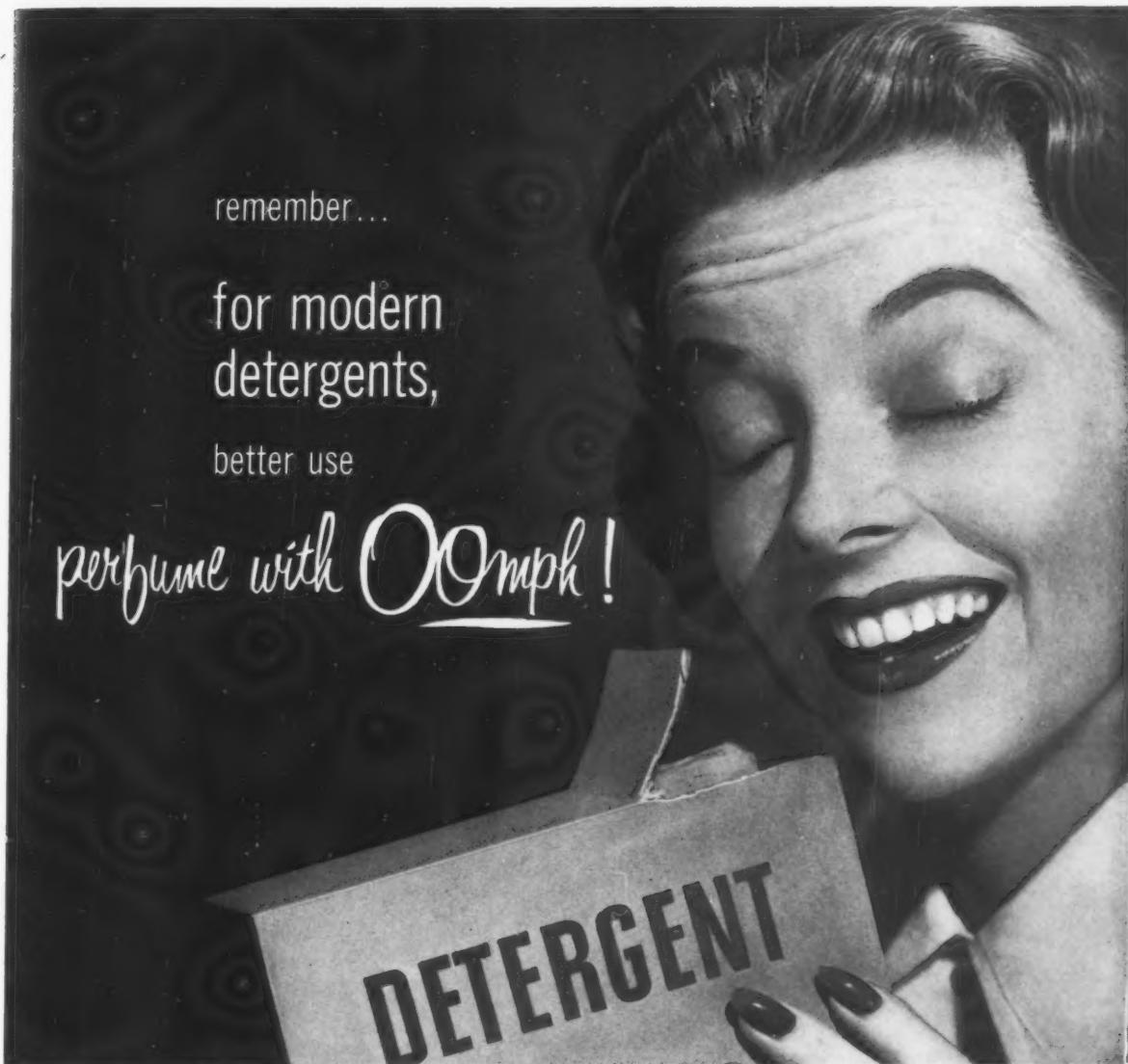
Arconomy Powder is powdered Dial without Hexachlorophene for light factory and office personnel. *Arconomy* is a 20% coconut oil soap (instead of the usual 5 to 15%) assuring fast, plentiful suds. Whether you repack it or sell it straight, *Arconomy Powder* is a fast-seller for dispenser use.

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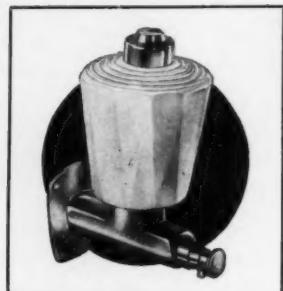
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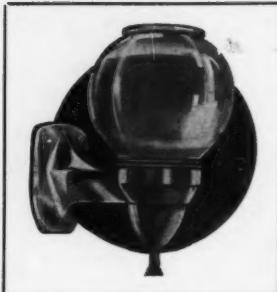
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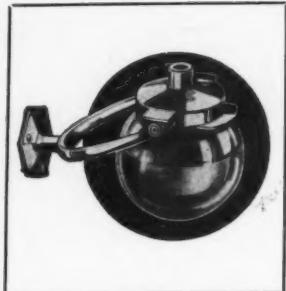
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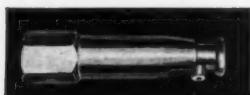


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Let Moore Brothers help you reap lots more dollars from soap sales, with 23 styles of attractive, durable and smooth-operating dispensers for liquid, lather or powder soaps. Dispensers priced for every requirement . . . designed for all types of installations.

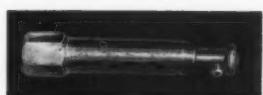


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*Write for our catalog sheets and
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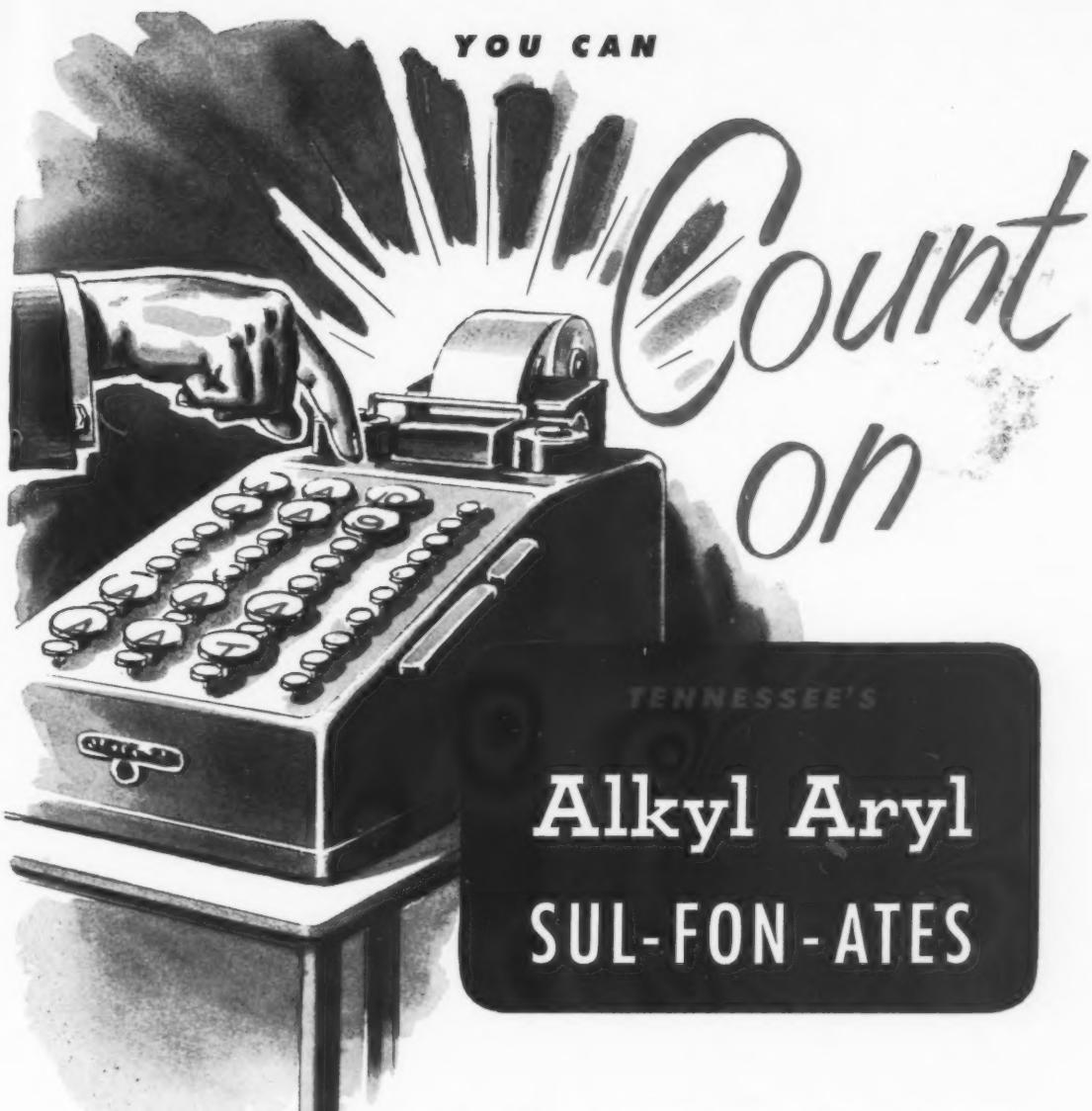
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SUL-FON-ATE AA 10 (essentially salt free) is an exceptionally high active (96%) product for specialty applications.

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Optical Bleaches in Soap

OPTICAL bleaches are fluorescent dyes capable of converting ultraviolet shortwave light, which is invisible to the human eye, into long-wave visible light. This apparent increase in light makes undyed fibers appear "whiter," delicate colors more luminous; yellowing of goods is compensated for by a dye of bluish fluorescence which creates an impression of "pure white."

An optical brightener can be active only in the presence of ultraviolet light, i.e. day light or under an UV lamp. The whitening effect is almost completely absent under artificial light, which is poor in UV radiation.

The fluorescent properties of esculin were first used for optical bleaching of textiles by Krais in 1929. One of the oldest optical brighteners was "Ultralin," the acetate of beta-methylumbelliferone (Austrian patent 151,635 and Swiss patent 192,557).

Other early fluorescent dyes were derived from cumarin. They lacked wash-, rinse-, and boil-stability. Textiles treated with these products were apt to yellow. The fluorescent activity of di-aminostilbenedisulfonic acid derivatives is the basis of many optical brighteners currently on the market (Wendt and Eggert, German patent 731,558, and French patent 870,470). Benzidines, di-imidazoles, and diphenyl-imidazolones are other fluorescent groups.

A close relationship between fluorescence and presence of at least four conjugated double bonds in the molecule of the fluorescent compound has been pointed out by recent investigators. Substantivity and other characteristics of these dyes can be modified according to

Optical bleaches are direct dyes. Depending upon application, they may be designed with specific affinity for various fiber types.

individual requirements by introduction of urea groups, tri-azin and cyanuric rings, carbonamide groups, etc.

Optical bleaches are direct dyes. Depending upon application, they may be designed with specific affinity for cellulose fibers; animal fibers, such as wool and silk, and for polyamides such as Nylon or Perlon, and accordingly for absorption from a neutral, weakly alkaline or acid bath, respectively. Some universally applicable whiteners are also being made.

The present study is concerned with whiteners designed for use in the washing process, applicable in conjunction with the bleaching agents such as per compounds if desired, or for use in the rinsing process. Brighteners suitable for cellulose fibers and absorbed from weakly or moderately alkaline baths are investigated:

In a properly built optical bleach substantivity and removability must be well balanced. A certain degree of fastness to a hot alkaline medium, to soap, and to synthetic detergents must be present to avoid insufficient absorption or removal in the rinsing process. But this fastness must not be too great, otherwise undesirable build up takes place leading to discoloration or chalky white appearance after a certain number of applications.

An optical brightener may be applied during the hot washing process or during the first warm rinsing bath, the latter being the most favorable. Yet, the majority of brighteners are being built into the washing compounds because these enjoy the largest consumption.

Addition of a fluorescent dye to a so-called self-acting washing compound permits reduction of the seven to 10 percent perborate content, which is customary in such cleansers, to four or five percent without loss in whitening effect. Apart from obvious economy, such procedure results in less oxygen damage to the fabric, such as depolymerization of reclaimed cellulose. The same considerations are valid in commercial laundries, where use of optical bleaches can cut down peroxide consumption and help to preserve the fiber. Fluorescent dyes are said to be harmless to the goods. For fastness to ironing, thorough rinsing of the wash is essential. For this reason optical bleaches should be applied only in the first rinsing bath. Lawn bleaching, prolonged exposure to sun light, and frequent moistening impair whiteness. Optical brighteners are somewhat sensitive to bleaching powder liquor and are incompatible with many cationics. Absorbed brighteners can be removed by treating the cloth for half an hour with a two to four gram/liter solu-

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silicate**

Sixty pounds of DRYMET—anhydrous sodium metasilicate—will do the same amount of work as one hundred pounds of pentahydrate sodium metasilicate! You get approximately two thirds more chemical value in DRYMET, yet the price is less than one fourth higher at the producing factory!

DRYMET contains no water of crystallization. DRYMET is more economical to use on the basis of Na_2O (alkalinity) and SiO_2 (silicate) than *any other* type of anhydrous or hydrated detergent silicate.



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HEAVY CHEMICAL DEPARTMENT

If you are compounding with detergent silicates, investigate DRYMET for higher concentrations and longer mileage in such products as:

1. Floor Cleaners
2. Laundry Products
3. Metal Cleaners
4. Dairy Cleaners
5. Dishwashing Compounds
6. General Purpose Cleaners
7. Soap Builders
8. Paint Cleaners
9. Paper De-inking Compounds

If you are using detergent silicates directly in your operations, investigate DRYMET for:

1. Reductions in product costs
2. Reductions in freight costs
3. Reductions in storage costs
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*Reg. U. S. Pat. Off.

Cowles CHEMICAL COMPANY
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SOAP and SANITARY CHEMICALS

tion of oxalic acid at 60°C. After such treatment thorough rinsing is most important.

Many manufacturers recommend the addition of optical bleaches to soap. It is not advisable to work these dyes into the hot soap batch which will remain for some time in the feeder or crutcher. They may, however, be simply added in the mixer to such products as soap flakes or milled toilet soap. Little fluorescence is produced in the soap itself by this procedure. White soaps derive more brilliance from the addition of very small amounts of titanium dioxide. Yellow curd soaps cannot be optically brightened at all. But every soap containing a fluorescent dye transfers the effect of such an additive to the wash. Addition or concurrent use of an optical bleaching agent is therefore to be recommended in the case of real laundry soaps and especially of laundry soap flakes.

Quantitative determination of optical brightening is based on a new photoelectric fluorometer. The most recent method utilizes an electronic ultrascopetrophotometer. Practical tests with three different washing agents show the following:

1. Absorption of the optical brightener occurs very rapidly in the first wash or rinse, is slowed down after the fifth treatment, and gradually approximates a maximum value.
2. The amount of brightener absorbed depends on the density and surface of the textiles. The closer the weave and the larger the exposed surface area of the fibers the more brightener is absorbed.
3. Absorption also depends upon the laundering method. The intensity of agitation (as produced in a washing machine) has a direct bearing on the rate of utilization of the washing or rinsing bath which contains the whitening agent.
4. In machine washing where the goods are thoroughly moved about the same results are produced whether the brightener is applied during washing or

rinsing. In the household wash (boiling in a covered vessel) the brightening effect is greatly increased by use of the dye in the rinsing bath.

5. The actual washing and bleaching process is not influenced by the optical bleach. Use of a well designed washing compound, possibly in conjunction with a per compound, remains the prerequisite for good laundering results.
6. Objective determination of fluorescent light is possible with the photoelectric fluorometer.
7. Soiled fabric absorbs less brightener than fabric washed

clean. Washing compounds which contain a bleach in addition to the actual cleansers are therefore recommended for use in conjunction with optical brighteners, to avoid a patchy effect.

8. Evenness of brightening depends on laundering time and intensity of agitation. An additional leveling effect is produced by the surface activity of the detergents.

The fluorescent dye (Betiol) tested exhibited satisfactory fastness to washing and rinsing, chemical stability to organic detergents,

(Turn to Page 89)

New Dispersing Unit

The availability of its newly designed disperser and homogenizer was announced recently by Tri-Homo Corp., Salem, Mass. The new, heavy duty unit is furnished with a variable speed motor drive, permitting operating speeds of from 2500 rpm to 20,000 rpm.

The new "Tri-Homo Disperser and Homogenizer" is designed for use with any liquid or paste type product (not dry powders) that require particle size reduction, dispersion, milling, emulsification, homogenization, wetting or blending. The new unit can handle heavy, viscous compounds having a low moisture

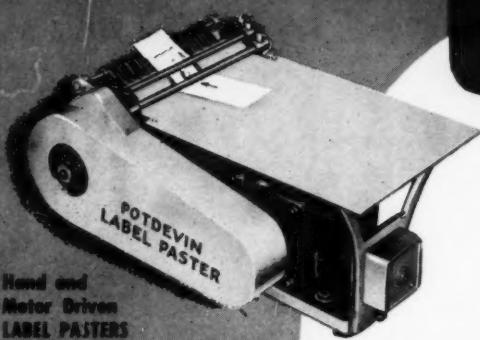
content that are not easily dispersed with a high speed mill. The unit can handle such compounds with a worm impeller. Correct milling speed can be obtained with convenient levers. The particle size of the product can be set with a hand adjuster of the micrometer type, graduated in thousandths. Correct speed and water cooling jacket are designed to eliminate overheating.

Special type roto and stator, depending upon the type of material to be handled comes in meehanite, stainless steel, silicon carbide, etc., in plain surface or with different types of serrations for fibrous or pulpy compounds.



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Semi-Automatic Feed
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POTDEVIN RELEASE-COTE available in quart, gallon
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On this page several of the many POTDEVIN standard machines are illustrated. These are particularly suited for short-run production or for auxiliary use so as not to disturb a mass production equipment set-up. They are available on a **FREE TRIAL**. Write for literature and details on the complete POTDEVIN line.

Hand and Motor Driven LABEL PASTERS

Highly versatile, handles any shape label without adjustment. Dial control regulates paste flow, eliminating excess. Cuts stock loss. One machine can supply several operators. Available in 6"-8½" models.

Semi-Automatic Feed LABEL PASTERS

Quickly adjustable to all shapes of labels, from ½" to 7½" wide. Dial regulates paste flow. Speeds production up to 50%. Suitable as auxiliary unit in mass production operation. Leaves mass production equipment undisturbed.

LABEL ACTIVATORS for Thermoplastic Labels

Activates delayed tack, pre-coated labels quickly and evenly. Permanent labeling on glass, metals, plastics, fabrics, etc. No water or glue to smear product. Thermostatic heating control. Small and portable. Available for 6" and 12" widths. Motor driven.



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SOAP and SANITARY CHEMICALS

per-compounds, and laundry alkali, and satisfactory fastness to ironing. Undesirable buildup was not found even after 25 washings or rinsings. Discoloring side-effects were practically absent. Kurt Lindner, *Seifen-Oele-Fette-Wachse*, No. 16, 1953, page 412-413; No. 17, page 438-441.

Precipitator Booklet

An illustrated, 20-page booklet, Bulletin No. 2204B, describing the applications, principles of operation, design features, recommendations, etc., of the Permutit precipitator in its three basic designs has been prepared and is available from Permutit Co., 330 W. 42nd St., New York 36, N.Y. The precipitator provides what is claimed to be an efficient means of removing impurities from a liquid by precipitation, adsorption, settling and filtration. The unit is said to require less space, fewer chemicals and less reaction time than previous designs. Chief uses of the unit are in water softening, removal of turbidity, color, taste, odor, alkalinity, silica and fluorides.

New Tall Oil Booklet

Publication of a 24-page booklet dealing with industrial applications for tall oils, as well as methods of testing and refining tall oil, was announced recently by K. A. Steel Chemicals, Inc., Chicago. The comprehensive booklet, entitled, "Steelco Tall Oil Products," describes the methods of refining and testing tall oils and offers complete information on materials for storage and processing equipment. The principal chemical reaction involving the fatty and rosin acids of tall oil are discussed and typical reactions illustrated.

The major portion of the bulletin is devoted to industrial applications for tall oils and includes water soluble soaps, sulfonated tall oils, non-ionic detergents, metallic soaps, esters and sulfurized tall oils.

A free copy of Steelco bulletin No. C-53 may be obtained by writing K. A. Steel Chemicals, Inc., 7450 Stony Island Avenue, Chicago 49.

New Type Organic Sequestrants

THE development of a new type of organic sequestering agents, described as stable salts of poly-amino carboxylic acids, and marketed under the trade name, "Perma Kleers," was announced recently by Refined Products Corp., Lyndhurst, N. J. The new sequestrants react with metal ions to form water soluble chelates, deactivating them, without actually removing them from solution. The metallo-Perma-Kleer complexes are claimed not to be precipitated by such agents as soaps, oxalates, phosphates, etc. The tendency to form metallic complexes is such that most insoluble metal compounds are chelated. Of the common anions, only sulfide resists this force.

As to the effect of these new chelating agents on pH, the maker claims the "Perma Kleers" will chelate calcium down to pH7. Ferric ion is sequestered beyond pH11 with only moderate loss in efficiency. In addition, these new sequestrants are said to form soluble complexes with ferric ion in both alkaline and acid media. This effect is claimed to be particularly noticeable in the presence of soap and synthetic detergents.

When the "Perma-Kleers" are added to soap and synthetic detergents, an increase in foam and detergency is observed. This action, which is similar to that observed with polyphosphates, is apparent in both hard and soft water. This behavior cannot be attributed solely to chelation of calcium and magnesium ions in the water, but rather is the result of the detergent building properties of the new sequestrants.

Where the stable salts of polyamino carboxylic acids are added to a solution containing various metal ions, chelation will be preferential. One metal will be completely sequestered before another metal. The metal sequestered first will have the highest stability constant. Chelation will continue in order of decreasing constants until either the

metal ions or the sequestrant are exhausted.

The only exception to the example above is ferric ion. Chelation takes place independently, and is not usually affected by the presence of divalent metal compounds. The major factor in chelation of ferric ion is pH. Maximum sequestration reaches its peak somewhere around the neutral point, dropping slowly as the pH is raised. Even when the complex is completely saturated with ferric ion, it still retains full chelating power for calcium, magnesium and divalent metals, according to the maker.

A free booklet dealing with the new sequestrant and its application is available from Refined Products Corp., Lyndhurst, N. J.

Portable Paper Cutter

A portable paper cutter designed for conveying large rolls of wrapping paper to places where they are needed for lining box cars or wrapping large merchandise was announced recently by S. J. Bina Co., Grand Forks, N. D. Coming in two sizes, the "B-Line" portable paper cutter is easily balanced and can be rolled with little effort on rubber-tired wheels to places where it is needed. Model B-72 handles either 72 or 60 inch rolls of nine inch diameters. Any length of paper can be torn off, cleanly, easily and quickly. Like Model B-48, which handles 48 and 36 inch paper rolls of the same diameter, the cutter can be used in a vertical or horizontal position. Both models are of all steel construction. They feature sure-grip handle, which enables users to tilt and wheel the cutter from place to place; adjustable spring clamps, which permit tightening of cutter bar to assure uniform cutting of paper and avoidance of slipping; rubber tired-wheels; turn-table base, which permits the roll of paper to be easily unrolled, and heavy metal base which prevents the paper cutter from tipping when it is in an upright position.



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This is one of the many outstanding Verona fragrances that is helping market leaders on their road to success.

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- **CYCLAMAL** Add up to 5% . . . for a cleaner, crisper impact.
- **CUMIN KETONE** . . . See how only $\frac{1}{4}$ to $\frac{1}{2}\%$ added to your present floral fragrance heightens and freshens the effect.

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Day Roller Mill Book

The availability without charge of a complete, detailed instruction book, "Installation, Operation and Care of Day Roller Mills," was announced recently by J. H. Day Co., Cincinnati. The 32-page booklet fully describes all three sizes of Day "Type-B" roller mills and gives complete information on their operation and maintenance. Many simplified illustrations amplify the text, describing the various sections and operations of the 14 x 30 inch, 10 x 12 inch and 5 x 12 inch mills. Frame, rolls, bearings, gears, drive, apron, scraper blades, feed hoppers, etc., are explained individually and in detail.

The booklet points out that the two most important factors affecting the correct operation of the mills are the condition of the rolls and scraper blades. Sections on installation, preparation for starting, initial starting and operation in general, disclose pertinent facts on care and operation. Maintenance, repair and cleaning techniques are discussed at length, and lubrication charts are provided in the final section of the book. A parts list is included along with the method for ordering spare parts. Copies are available free by writing the company at 1145 Harrison Ave., Cincinnati.

Bag Filling, Closing Plant

Automatic flat bag filling and closing machines capable of handling powdered and granular materials are described and illustrated in a folder issued recently by Hoeller Brothers, Bergisch Gladbach near Cologne, Germany. These units are suitable for packaging quantities from one grain to approximately nine ounces in bags ranging in width from one inch to 5½ inches, with ungummed sealing flaps of paper or cellophane. For cellophane bags a heat sealing device can be installed and for the filling of powder products a vacuum dust extractor can be fitted. Model "MK" is said to be especially suitable for the packaging of shampoos in double bags and to be capable of an output of approximately 70 double packages

per minute. The German maker of these packaging machines is represented in the United States by Ulbeco Inc., New York.

Glyco Offers "Tetrines"

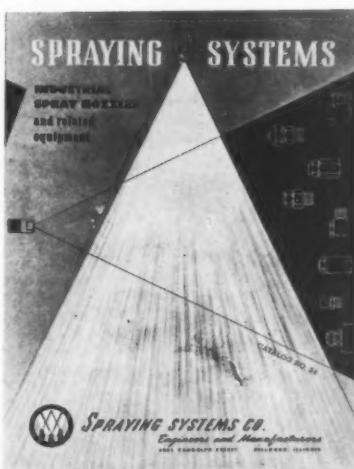
Ethylenediamine tetraacetic acid and its salts are being offered by Glyco Products, Inc., Brooklyn, N. Y., as sequestering, chelating, and complexing agents, under the newly granted trade-mark "Tetrine." The "Tetrines" are used to bind polyvalent interfering ions such as iron, calcium, etc.

British Tubes Standardized

A British standard has recently been established for the dimensions of collapsible tubes with short screwed nozzles (B.S. 2006). This relates to tubes used for a wide range of pastes and semi-liquid materials such as toilet preparations, shoe creams, etc.

Spray Nozzles Listed

A new 48-page illustrated catalog listing standard and special industrial spray nozzles, covering their capacity, spray angle, and dimensional specifications, was announced recently by Spraying Systems Co., Bellwood, Ill. Catalog No. 24 gives data on thousands of nozzles and on such related equipment as line strainers, elbows, check valves and adjustable joints. It features tables on spray coverage and pipe frictions. Nozzles are indexed in terms of spray patterns.



Horix Filler Bulletin

Horix Manufacturing Co., Pittsburgh, recently issued an illustrated brochure, describing its complete line of filling equipment for liquid and semi-liquid products. Apart from the Horix fully automatic standard gravity and gravity-vacuum fillers, the bulletin gives information on a new automatic rotary gravity filler for corrosive products, and on semi-automatic and hand-operated units. The latter are especially designed to handle small production runs. Bulletin No. 155 is available upon written request.

New ADM Bulletin Issued

The chemical products division of Archer-Daniels-Midland Co., Cleveland, published recently a brochure supplying technical information on its line of fatty alcohols. The bulletin covers chemical structure and composition, reactions, applications, and solubility data of the firm's "Adol" standard series of alcohols.

In addition, a new line of "Adols" and "Unadols," currently available in pilot plant quantities for research and development, are described in this technical bulletin No. 903-A.

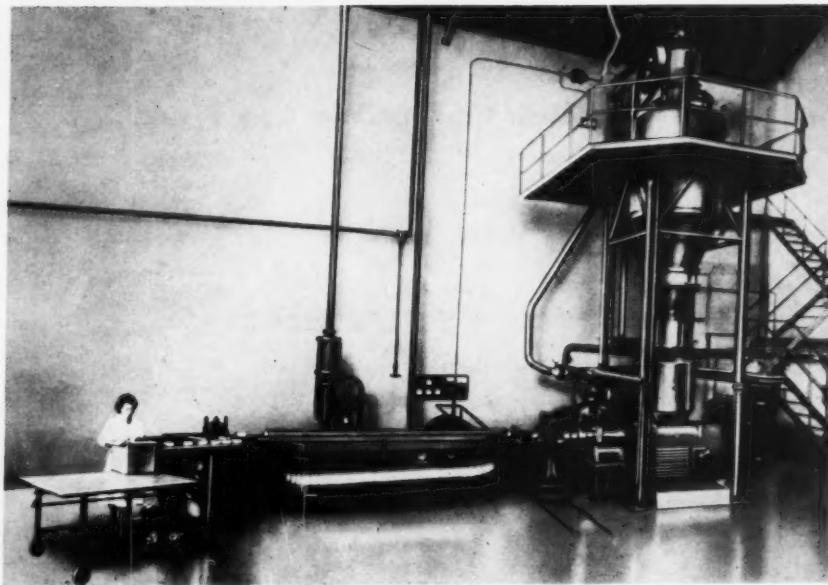
Sodium Dispersions Data

Sodium dispersions, their properties, preparation, and industrial applications are reviewed in a thirty-page illustrated booklet issued recently by U. S. Industrial Chemicals Co., New York. U.S.I. handles the sale and development activities for metallic sodium produced at Ashtabula, O., by National Distillers Chemical Co. The brochure includes information on technique for the preparation of sodium dispersions, diagrams of equipment used, dispersion formulations with tables, methods for industrial use of these formulations, illustrations of sodium preparation and shipment, and sodium dispersion preparation and handling. Sections on handling procedures, analysis of sodium dispersions, availability, and a bibliography are included.

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Continuous Soap Plants

save time, labor, steam, power, plant space



View of MAZZONI automatic vacuum soap equipment with a capacity of one ton of household soap per hour.

Advantages of the MAZZONI Process:

- ★ Small plant space; only one operator needed.
- ★ Saves 70% in steam, 50% labor, 40% electric power.
- ★ Operates at low temperature, avoiding deterioration of soap.
- ★ Vacuum process gives better toilet soaps. Deodorizing effect reduces perfume needs. Smoother, grit-free cakes which wash off evenly. Improved lathering. Automatic perfume-fuming device included.
- ★ Laundry soaps, pure or filled, ready for pressing and immediate packing without slabbing, cutting, etc.
- ★ Suitable for adaptation in any soap factory, — a compact, low-cost vacuum process, continuous from neat soap to pressing and wrapping.
- ★ Plants for outputs of half-ton, one ton, or two tons per hour.

For further detailed information, write to

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PRODUCTION *Clinic*

By E. G. Thomssen, Ph.D.

NEW resolutions and a new year are closely associated. It is a human characteristic to look ahead to a new year, resolving to deny ourselves something, to be more kindly, to improve upon certain personal habits and to fulfill some worthwhile aims. While these resolutions may not be carried out through the entire year, they may result in considerable benefits and improvements for varying periods of time depending on the strength of the individual's resolve.

In business, making New Year's resolutions is as general as in personal life. New policies, greater employee benefits, greater sales efforts, improved products and methods of manufacture and similar projects may be planned for the year ahead. Production men, in many cases, ask themselves: How can plant operations be made more efficient in 1954? This is a very pertinent question to ask, not only at the beginning of the year, but during every month, week or day of the year ahead. The necessity of operating at peak efficiency in 1954 is underlined by predictions of reputable forecasters who say that competition will be keener this year than in the recent, golden years.

Automatic and improved machinery and equipment have accomplished much in reducing manufacturing costs. Straight line production and apportionment of individual tasks among factory employees have resulted in economies. In recent times more emphasis is being put upon means and devices of eliminating human labor almost entirely. Greater dependence is being placed on mechanical "brains" and machines for more and more operations now performed by men and women. Automatization, instrumentation, electronic controls and similar terms are applied to me-

chanical devices replacing manpower.

There is a growing list of instances of mechanization in which



DR. THOMSSEN

completed jobs are turned out in minutes and with less labor than formerly, when for the same jobs, hours were required. The types of work done vary considerably. In a new textile mill visited recently by the writer one operator was doing the work that required eight a year ago. She had so much idle time that four more machines were being put under her supervision.

In the new Los Angeles plant of Lever Brothers Co. production economies and uniformity of quality in making toilet soap, powdered soap, and syndets are accomplished through instrumentation according to a recent article in this magazine.*

Operating control boards in oil refineries enable twelve men to run a refinery which would require 800 men without these automatic controls.

Remote control of tow and fork trucks is now possible, while increased efficiency and improved service is accomplished through the use of specially built television cam-

*Soap & San. Chems., Sept. 1953, p. 46.

eras in operating steam boiler plants, burning gas and oil. Push button control, requiring only one fifth of the time formerly needed, is possible by this innovation. Machines which aid in keeping inventory records, costs and similar details can reduce clerical help considerably.

Automatization can best be adapted for operations required for volume production or packaging of a single item. Where frequent change-overs for different sizes or styles are necessary, the difficulties involved are such that the cost of the equipment usually does not warrant its installation. Manufacturers of automatic equipment, one of these days, will undoubtedly devise machines and instruments that are sufficiently flexible for use on more than one item and be economical for smaller runs.

Naturally, protests are to be expected from men and women whose jobs are lost to robots. However, based on past experience, management should be aware that, while temporary unemployment results, mechanical improvements have always resulted in less drudgery, more and better jobs, more leisure time and higher standards of living. When these facts are brought to the attention of disturbed employees, their opposition should be softened considerably.

At the beginning of a new year, then, alert, progressive production men will do well to study the possibilities of automatization. The advantages of lower labor costs, speedier production, fewer human mistakes, greater uniformity of processing and packaging, as well as the competitive aspects make the subject one well worth study.

Glass Uses

TWO rather unusual uses of fiber glass and foam glass were announced recently by Owens-Fiberglass Corp., New York 22. One is a fiberglass reinforced tape. The strength of this tape makes it applicable for use in packing operations now requiring banding with wire or steel tape. The new material, which adheres instantly, may

VERSATILE as it is POTENT

MAPROFIX POWDER LK

92%

ACTIVE
detergent and
foaming agent

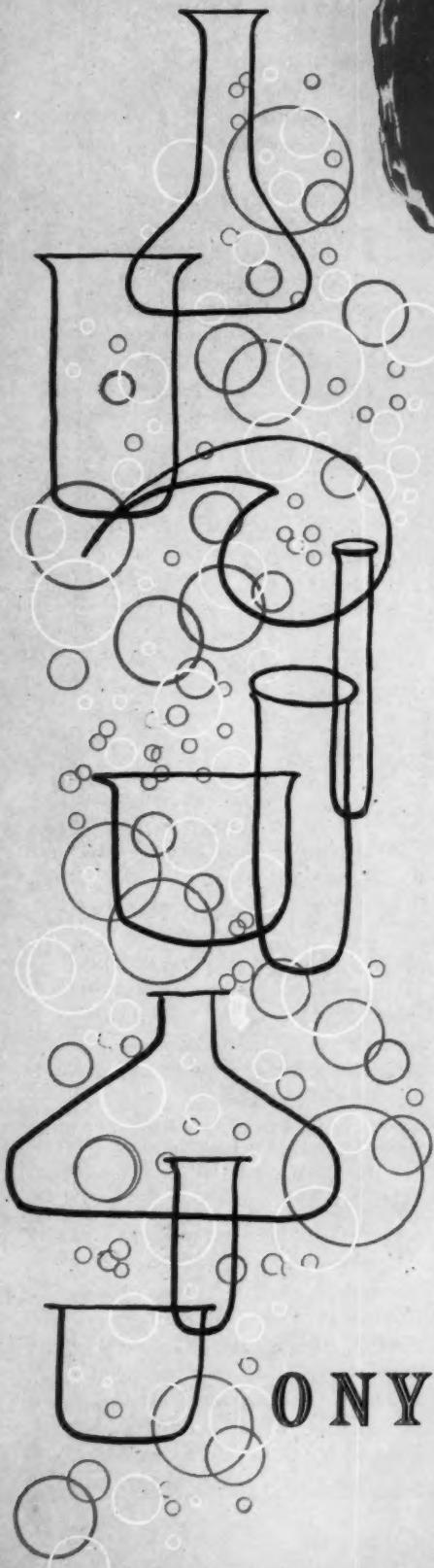
Performing with an economy that makes it attractive for an unusually large number of diverse uses, **MAPROFIX POWDER LK** is one of the most potent synthetic detergents and foaming agents available on the market, and also offers further advantages as an effective wetting, penetrating and dispersing agent in various applications.

A highly concentrated anionic surface active agent, the 92% activity of **MAPROFIX POWDER LK** recommends it especially as a carpet cleaning, general household and industrial detergent, as well as a foaming agent for dentrifices, shampoos and cosmetic products. Its foaming qualities are unusually good, producing exceptionally large volume with extraordinary persistency.

As a dispersing agent, **MAPROFIX POWDER LK** has proven itself excellent in paints, pigments, insecticides, fungicides and cosmetics. As a wetting and penetrating agent, **MAPROFIX POWDER LK** is highly effective over the entire pH scale, is most resistant to all types of water hardness; and as an emulsifier acts readily and permanently on many types of oils.

MAPROFIX POWDER LK is no more toxic than ordinary soap, is completely stable and readily soluble in warm water.

For concentration, effectiveness and economy, **MAPROFIX POWDER LK** is the perfect solution for innumerable manufacturing problems. A working sample, sent with complete technical data at no obligation, will prove its advantages—ask for it today.



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be applied quickly, and requires no special tools for application or removal. It need not be wrapped entirely around packages to hold properly.

"Foamglass," a cellular glass insulation that remains dry, is suggested by Pittsburgh Corning Corp., Pittsburgh, 22, Pa., for insulating piping and processing machinery. It is claimed that aluminum jacketed "Foamglass" may be applied faster and more cheaply than other insulating materials. Other advantages are that it is moisture and weather proof, attractive in appearance, low in cost, less costly to maintain, rigid and efficient in insulating.

Coding Machine

THE "Corliss-Coder" is useful for bulk coding of labels at lowest cost and maximum efficiency, according to its maker, Adolph Gottscho, Inc., Hillside 5, N. J. The machine is compact, noiseless, automatic, is quickly adjustable to different size labels and changes in copy. It delivers the coded labels in a single stack and has a positive separation device to prevent "skips."

Pipe Thread Sealer

A PIPE thread sealer that is made from a compound that includes "Teflon," made by E. I. du Pont de Nemours & Co., Wilmington, Del., is offered by Eco Engineering Co., Newark, N. J. The release compound may be used for metal or plastic piping, and is chemically inert. A seal is possible for fluids or gases. The piping may be unscrewed readily when necessary as the joints are easily broken.

Automatic Checkweigher

OVERWEIGHTS of bags, drums, cartons, cans and similar packages are automatically prevented by the use of the Thayer Checkweight Scale. Model 200 S separates improperly filled overweight or underweight packages from those correctly filled. It deposits them at the opposite ends of the scale by means of a two way conveyor. A bulletin on this device is available from Thayer Scale & Engineering Corp., Rockland, Mass.

Dishwashing Machine Data

GERITY-Michigan Corp., Toledo, is now offering a free pamphlet entitled, "Dishwashing the Easy Way." Described in the pamphlet is the firm's "Dishmaster," for which certain advantages are claimed. It is a hand dish washer that continuously removes waste food, washes with aerated suds and rinses, all in one motion.

Detergents . . .

(From Page 37)

In spite of the shifting of emphasis from one type of surfactant to another the upward trend of surfactant sales continues. Certain trends which have developed recently include:

1. While synthetic detergents in 1952 represented about 53 percent of all packaged washing products and totaled approximately 2.2 billion pounds, most industry people anticipate that the percentage will ultimately grow to 70 to 75.
2. Although the alkyl aryl sulfonates and lauryl alcohol sulfates will continue to be the major surfactants used in packaged products, some firms are finding that fatty acid alkanol amides have synergistic properties with both alkyl aryl sulfonates and alcohol sulfates. By the use of a few percent of these fatty acid alkanol amides the active ingredient can be reduced from 35-40 per cent to 18 and 20 percent.
3. Packaged liquid synthetic detergents have shown real expansion in the past two years with sales of 34 million pounds in 1951 and approximately 50 million pounds in 1952. With additional packaged liquid detergents being introduced this year, it is expected that liquid detergent sales will continue to increase. The products which have shown the most promise in liquid detergents are: salt-
4. The development of a continuous process for preparing N-methyltaurine has been instrumental in reducing its price to consumers. With this reduction in price the manufacturers of sulfonated fatty acid amide type materials will be able to offer these materials at a more competitive price. These products have always been excellent performers but expansion outside the textile industry has been limited because of price.
5. The development of sulfonated fatty acid amide slurries should expand usage in industrial and textile applications. With reduced cost for methyl taurine the slurry can be offered to the consumer at a more attractive price.
6. The expanded uses for non-ionics and compatibility with other surfactants have been utilized to great advantage, particularly with insecticides, paints, lubricating oils, textile operations and many other industrial operations.
7. The utilization of Sulfan (stabilized liquid SO_3) has aided the preparation of salt-free alkyl aryl sulfonates and other sulfonates.
8. The sodium reduction of tallow to a mixture of low cost tallow alcohols (consisting of 18 percent stearyl, 50 percent oleyl, 29 percent cetyl and three percent myristyl) offers a new low cost raw material. These tallow alcohols can readily be converted to higher carbon fatty alcohol sulfates which, based on preliminary investigation, have a number

free 50 percent and 40 percent active alkyl aryl sulfonates as sodium and ammonium salts, ammonium and triethanol amine salt or lauryl alcohol sulfate, ammonium sulfate derivative of nonylphenol polyglycol ether and the synergists or foam stabilizers (lauric acid mono and dialkanol amides).



MECCANICHE MODERNE

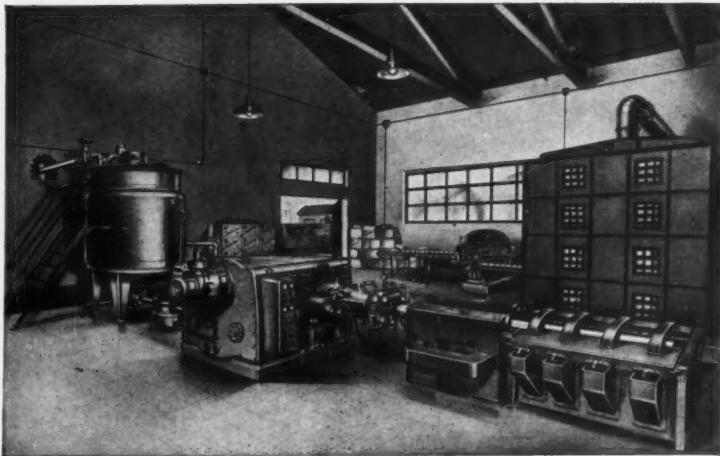
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(Italy) BUSTO ARSIZIO

PATENTED Cooling Extruder

Type SAIX for the continuous chilling and finishing of every kind of laundry soap, with 62%, 52% as well as with a T.F.M. content as low as 35%, either from full boiled kettle soap or from soap pads by a continuous process.

From the saponification (molten hot soap) to the finished bars (cold solid soap) in a single stage without any interruption or structural change. In this plant, completed by a preliminary evaporator of the



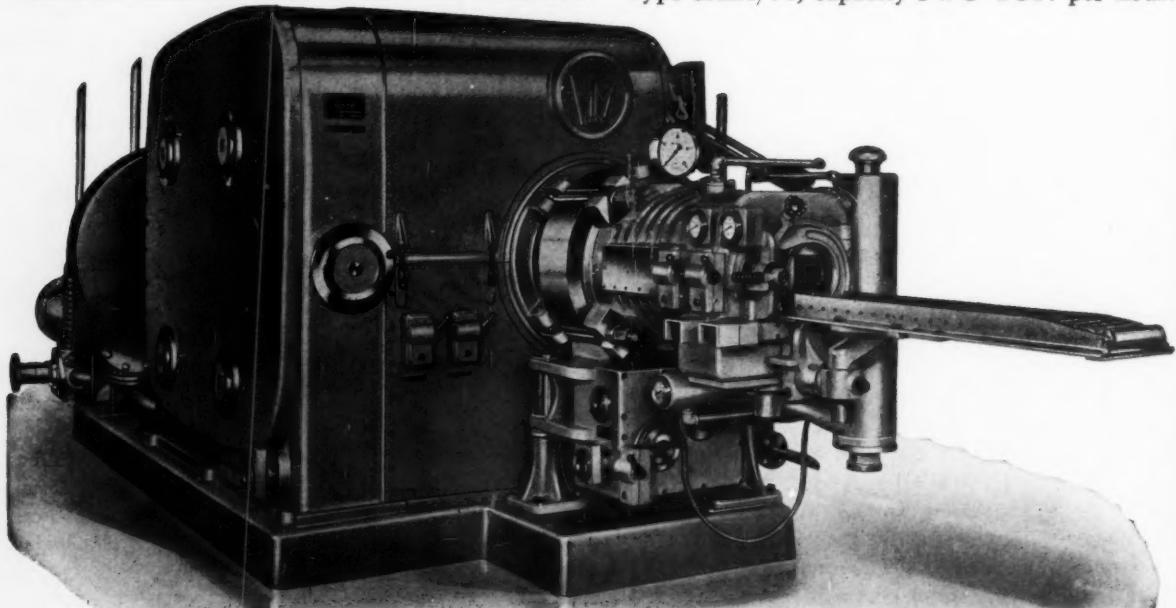
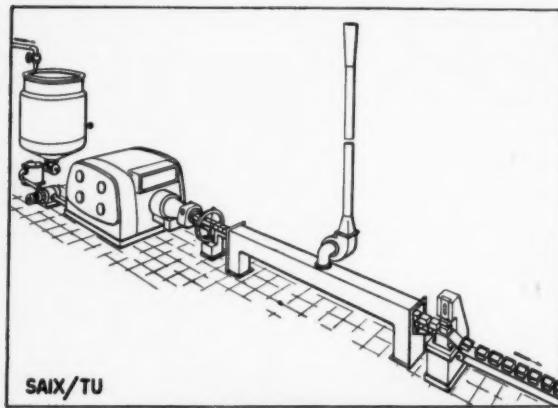
molten hot soap, it is possible to manufacture 72-73% T.F.M., soaps with an opaque, translucent or transparent appearance. The soap is continuously formed in bars of every desired size or in pellets for further milling procedure.

In this plant it also is possible to manufacture conventional or transparent toilet soaps without any formation of hard spots.

Type SAIX/1c, capacity HALF TON per hour.

Type SAIX/2c, capacity ONE TON per hour.

Type SAIX/3c, capacity TWO TON per hour.



PATENTED COOLING EXTRUDER Type SAIX/4c

of advantages over the lauryl alcohol sulfates and alkyl aryl sulfonates. With the expected lower cost of these tallow alcohol sulfates they should find ready markets in the textile industry, in industrial applications and in the packaged products.

9. The fatty acid alkanol amides have been used for some time by the textile industry in a wide variety of applications. Within the past few years their utilization has greatly increased due to their synergistic and foam stabilizing effect on other surfactants.

10. The development of toluene and xylene sulfonates as solubilizing and anti-caking agents and extenders of less soluble surfactant and combinations of surfactants has led to improvements in formulations.

11. The improvement and wider employment of alkyl aryl sulfonate slurries has expanded their use in detergents.

12. Many of the petroleum companies producing alkyl aryl sulfonates have a surplus of the alkane, prepared by the reaction of propylene tetramer with benzene in the presence of a catalyst. These companies are offering alkanes for sale along with know-how on sulfonating processes and equipment.

13. The utilization of chemical additives, such as complex phosphates, carboxy methyl cellulose, sodium sulfate, salt, optical brightening agents, bentonite and others have enabled the manufacturers and compounders to prepare formulations of synthetic detergents for more specialized applications.

14. The development of specific nonionics and some anionics as low-foam detergents for use in automatic home washing machines and automatic dishwashing machines has filled a gap where heavy foam is a positive detriment to proper cleaning.

15. The recent findings that fatty acid sarcosides and dehydro sulfo acetate are enzyme inhibitors has led to a concentrated investigation of related products and new applications.

16. Emphasis on the development of a bar detergent has been abetted by recent government specifications which call for an all synthetic bar.

17. The rapid growth of aerosol type products is expected to bring many new developments in the surfactant field.

Syndet Future Bright

THE future for the synthetic detergent industry is still very bright. New uses are constantly being found for surfactants. The consumption in the old, established applications is constantly being increased. The largest single new use to which synthetic surfactants have been put in this country in the past several years is in the household field. The industrial applications are continuing to grow at a somewhat slower pace, but will unquestionably go higher at a slightly faster pace as improved benefits at very low cost are developed and wider usage of these surfactants is exploited in untouched fields. The textile markets will continue to hold their present high level (barring unforeseen slump periods) and will gradually increase as more surfactants replace soaps in the various textile operations. In addition, as the synthetic fiber industry grows, there should be sizeable markets for surfactants in the manufacturing process of fibers as well as in the after treatment.

There has been considerable plant expansion in the synthetic surfactant industry with the result that the country's total capacity for producing surfactants is probably in the neighborhood of 800 to 900 million pounds of 100 percent active material. Of this, roughly 43 percent represents the alkyl aryl sul-

fonates, 12 percent the sulfated alcohols, 12 percent the nonionics and the remaining 33 percent is miscellaneous sulfates and sulfonates, including the alkyl sulfonates, fatty acid amide sulfonates, and sulfates.

In this rapidly expanding industry there are bound to be continual changes taking place. The manufacturers of surfactants are constantly looking for new sources of low cost raw materials, new applications and uses, the development of new products, etc. to increase the volume of sales and the demand for synthetic surfactants.

Indications are that the alkyl aryl sulfonates will continue to be the work horses of the industry due to their low cost and versatility. As a result they will continue to increase and maintain their high level of use. However, their increase will be less rapid than in the past five to seven years. Also, the alcohol sulfates will continue to have a high level of sales. The volume of nonionics has been gradually increasing and it is expected their rise will be slightly faster, because of their unusual properties, wide variety of products to fill almost any requirement, the foam stabilizing and synergistic properties of special types with other surfactants, and their versatility.

There is no questioning that the soap and synthetic detergent industry should feel proud of its accomplishments over the past forty years. Their improvements and advances have been an important factor in raising standards of living. Even so, it is believed by many that we have just begun to realize the benefits that they will contribute to our daily life.

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3. F. D. Snell, *Chemical and Engineering News*, 28, 29 (1950)



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A. Gross Red Oils are outstanding as to stability and resistance to discoloration. They are manufactured in stainless-steel equipment, packaged in specially lined drums, tank wagons, tank cars — to insure freedom from contamination.

Your process requires a Red Oil that has been handled with care, not only in our operations but in yours as well. Our Sales Service Department welcomes customer inquiries on how best to maintain Red Oil purity during your final application procedures.

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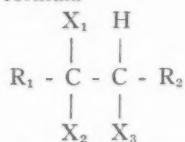
Products and PROCESSES

Wax-Rosin Floor Polish

A floor polish comprises 15 to 30 percent by weight of wax (carnauba, bees, candelilla, ceresin, or montan wax) and 10 to 30 percent by weight of a resinous film-forming material (rosin) in an aqueous medium (water and one or more dispersing agents) as well as minor proportions of disinfectants or coloring matter. The composition is prepared by adding an emulsion of the resinous material to an emulsion of the wax. British patent 649 013, Semtex Ltd., England.

Insecticidal Polishes

Polishes and stains contain an insecticidal ingredient of the general formula



Wherein R_1 and R_2 represent aromatic, aliphatic or araliphatic radicals which may be identical or different, X_1 represents a halogen atom and X_2 and X_3 represent hydrogen atoms or halogen atoms and may be the same as or different from X_1 and one another, or constitute a second bond between the carbon atoms. (provisional specification). British patent 604 926, Geigy Co., Ltd., England, specifications 547,871 and 547,874 are referred to, and specification 604,983 additionally in the complete specification.

Soap by Mazzoni Method

Continuous soap manufacture by the Mazzoni method is described and illustrated in an article by Milos Fock in *Seifen-Oele-Fette-Wachse*, No. 16, 1953, page 414-416. The author reports in detail on visits to several plants employing this method, and claims the following advantages for it: 1. Economy in labor. For an output of one metric ton of soap per hour only three persons are needed. 2. Economy in

fuel. The drying process utilizes heat released by the boiled soap batch. 3. Economy in raw materials costs. Expensive fats such as coconut oil can be replaced almost entirely by tallow and other animal fats. 4. Wide range of fatty acid content of soaps made. The plant can handle heavily filled curd soaps as well as high-percent toilet soaps of all customary levels of fatty acid content. 5. Wide variety of products. The whole range from complete opacity to complete transparency can be covered. 6. Elimination of atmospheric influences. The process takes place under a vacuum, which ensures freedom from chemical changes in the structure of the soap. 7. Absolute uniformity of fatty acid or moisture content. The Mazzoni plant subjects the soap mass to a completely level drying process.

More than seventy Mazzoni plants have so far been installed according to the author. Thirty of these units are located in Italy, others in France, Germany, Belgium, Central and South America, and in Africa.

Non-Corrosive Syndet

A new base for pressure-pack synthetic detergent hair shampoos, claimed to be remarkably free of corrosive effects on the packaging materials, was introduced recently by Stepan Chemical Co., Chicago. Through experimentation with the triethanolamine salt of lauryl sulfate, combined with a special inhibitor, the firm developed "Stepanol WAT Aerated Grade," which is said to overcome package failure caused by the corrosive action of sodium and ammonium salts of lauryl sulfates, on which such formulations are most commonly based.

In the process of testing, Stepan reports, pressure packed (aerosol) cans utilizing the new product were subjected to tempera-

tures of 140°F and 180°F for periods of 40 days. No corrosive damage was observed and the product itself was stable as to color and odor, it is stated. Similar results are claimed for synthetic detergents for pressure-pack rug shampoos. Finished formulations incorporating the new "Stepanol" are also available.

Chigger Repellent Mixture

Of 11 all-purpose repellent mixtures tried as clothing treatments against chiggers the following was reported the most effective for this purpose: benzyl benzoate 29.7; butylacetanilide 29.7; 2-butyl-2-ethyl-1,3-propanediol 29.7; and lindane 1.0 percent. The mixture was applied at the rate of 3.6 g./sq.ft. of cloth. With an average of four soap and water washings 100 percent protection was maintained. I. H. Gilbert and H. K. Gouck, *Florida Entomol.* 36, 47-51, 1953.

New Auto Polish

A new automobile polish comprises a mixture of powdered wax, talc powder and turpentine, which is sprayed on the surface in atomized form. The surface is then rubbed or polished with a rag. In an example 25 parts of wax, 10 parts of talc, and 65 parts of turpentine oil are used. British patent 648 486, E. Brennecke.

Detergents . . .

(From Page 49)

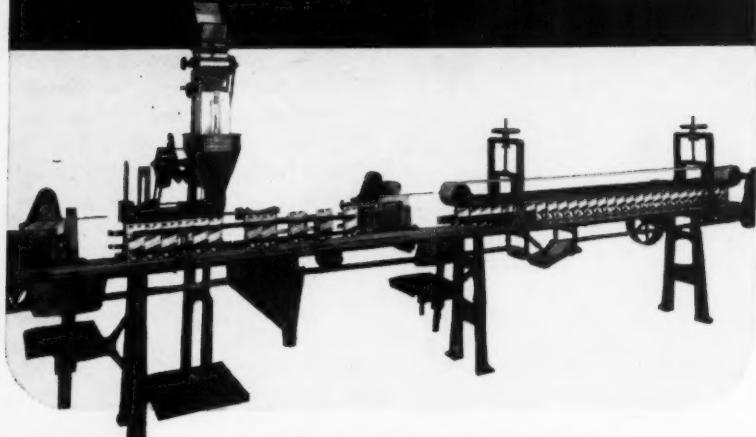
removal in this sea-water study, are capable of distinguishing poor from promising materials, but do not appear capable of differentiating between acceptable and superior detergents with any degree of reliability.

Only standard soiled cloths 7 and 8, representing a street dust type of soil, give results which correlate to a degree with evaluations of the detergents for their practical washing ability.

Whiteness retention results from a single washing cycle are of little or no value in measuring this

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characteristic except in obvious instances. A multicycle test will adequately differentiate among detergents with respect to their whiteness retention properties.

Acknowledgment:

The assistance of Rosemarie Maiorillo and Arthur Stander, who performed the experimental work, is gratefully acknowledged. We are indebted to Dr. Jacob Sherman, Industrial Test Laboratory, for the statistical analysis of the data, J. C. Harris of Monsanto Chemical Co. for the coordination of the cooperative test program, the National Security Industrial Association Advisory Committee on Detergents and the cooperating laboratories for their interest and cooperation.

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The views in this article are those of the authors and should not be construed as the official views of the Department of the Navy.

Tobacco Stain Remover

A tubed nicotine stain remover trade-named "Bantol" was introduced recently by Ashe Laboratories, Ltd., England. The product is claimed to also be effective in removing from the hands ink, vegetable, and paint stains, blemishes left by various photographic solutions, as well as other stains and dirt.

SOAP and SANITARY CHEMICALS

NEW Patents

The information below is furnished by patent law offices of

LANCASTER, ALLWINE & ROMMEL
402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. \$1.00 for Canada. They will be pleased to give you free preliminary patent advice

objectionable odor and a greyish color, and then treating the soap with a water-soluble inorganic zinc compound in an amount to eliminate the odor substantially and improve the color thereof.

No. 2,660,568. Water-Dispersible Metal Soap Composition, patented by Joseph Cunder, East Orange, and Francis J. Licata, West Caldwell, N.J., a corporation of New Jersey. As a new composition of matter, a solid comprising an intimate mixture of a water-insoluble metal stearate and a sulfated aliphatic alcohol containing from 8 to 22 carbon atoms, said composition of matter being characterized by the property of being readily dispersible in aqueous media and adapted to form free-flowing concentrated aqueous dispersions with aqueous media.

No. 2,658,818. Stabilized Hydrogen Peroxide and Methods of Making Same, patented by Edward S. Shandley, Grand Island, and Hans O. Kauffmann, Eggertsville, N. Y., assignors to Buffalo Electro-Chemical Company, Inc., Tonawanda, N. Y. The patent covers an aqueous solution of commercial hydrogen peroxide containing colloidally dispersed metallic tin.

No. 2,657,797. Process of Cooling Spray Dried Detergents, patented by Lowell A. Ledgett, Ridgewood, and Charles W. Deane, Summit, N. J., and John J. Mahoney, New York, N. Y., assignors to Colgate-Palmolive Company, Jersey City, N. J., a corporation of Delaware. The patent covers the process which comprises introducing hot spray-dried organic detergent particles through an air lock into a cooling system and feeding them to the bottom of a mass of such particles, passing cooling air under positive delivery upwardly through said mass of particles in said system at a velocity less than 25 feet per second, removing cooled detergent particles from the upper portion of said mass, conveying said removed particles to an air separating device, and separating said particles from said air in said separating device.

The process which comprises introducing spray dried detergent particles at a temperature too high for packaging through an air lock into a cooling system, partially cooling said spray dried detergent particles by blowing cooling air under positive delivery upwardly through a mass of said particles in said system at a velocity less than 25 feet per second continuously adding hot particles at the bottom of said mass, continuously removing partially cooled particles from the top of said mass, and classifying

the removed particles into product, tailings and fines while blowing additional cooling air transversely into and upwardly through a stream of falling particles to complete cooling them to the desired temperature.

No. 2,658,017. Insecticidal Compositions Containing 1,2-Dichloro-4-(*o*-Dichloroethyl)-Cyclohexane and Method of Using the Same, patented by Edwin G. Marhofer, Fredonia, Kans., assignor to Phillips Petroleum Company, a corporation of Delaware. An insecticidal solution is described comprising an active insecticidal toxicant selected from the group consisting of 2,2-bis(parachlorophenyl)-1,1,1-trichloroethane, the gamma isomer of hexachlorocyclohexane, chlorinated camphene, 2,2-bis(parachlorophenyl)-1,1-dichloroethane, *p*-tertiary-amylophenol, and 2,2-bis(paramethoxyphenyl)-1,1,1-trichloroethane and 1,2-dichloro-4-(*o*-Dichloroethyl) cyclohexane.

No. 2,658,851. Salt Dentifrice, patented by Jacques Edwin Brandenberger, Neuilly-sur-Seine, and François Jean Bossard, Paris, France, Application April 11, 1950, Serial No. 155,352. In France April 20, 1944. Section 1 Public Law 690, August 8, 1946. Patent expires April 20, 1964. A dentifrice composition of uniform paste-like consistency is revealed comprising more than 41% of a crystal-free concentrated hypertonic sodium chloride solution, with the liquid solvent and the dissolved salt in such proportion that the sodium chloride content is not less than necessary to maintain the solution in a near saturated condition, the said concentrated hypertonic solution being retained in its liquid state within the paste by forming part of an emulsion held and stabilized by chemically neutral emulsifying agents.

No. 2,660,588. Neutralization of Sulphonated Organic Esters, patented by Arthur Ira Gebhart, Union, and Joseph Edward Mitchell, East Rutherford, N. J. assignors to Colgate-Palmolive Co., Jersey City, N. J., a corporation of Delaware. The patent discloses the process of neutralizing acidic organic sulphonate material containing a compound having an ester linkage in the molecular structure which is hydrolyzable comprising carrying out the neutralization at a temperature above 20° C. by bringing said organic sulphonate material into contact with a neutralizing basic material which reacts therewith generating a gas producing a foamy mass containing organic and inorganic salts, said basic material comprising finely divided particles of an alkali carbonate suspended in a vehicle comprising water and organic solvent, said water being present in said vehicle in an amount within the range of about 15% to about 50% by volume.

No. 2,660,589. Elimination of Objectionable Odors From Soap, patented by Frederick J. Squire, Milton, and Peter D. Stengel, Belmont, Mass., assignors to Lever Brothers Company, New York, N. Y., a corporation of Maine. A process of preparing soap compositions which are substantially free of objectionable odors and have good color is patented which comprises bleaching water-soluble fatty acid soap with a hydrosulfite, whereby the soap has a tendency to acquire an



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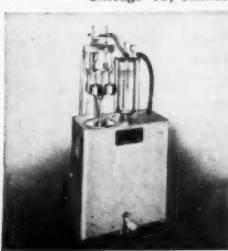
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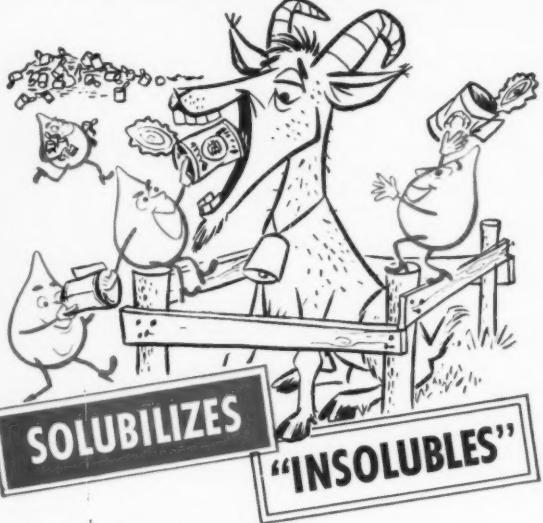
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SOAP and SANITARY CHEMICALS

By John W. McCutcheon

THE National Business Show recently concluded was the last show to be held in Grand Central Palace, New York. The building, taken over by the Department of Internal Revenue will be used for office space from now on. The writer tries to get to this show once every year or so to see what is new in the way of equipment.

Too often the show is passed over by the busy chemist or engineer on the grounds that he is having a hard time just keeping up with chemical progress without delving into the finer aspects of business administration. This reason is only partly valid. The tools of business often can be utilized by the chemist. Unless he has some idea of what is available, he often uses outmoded and inadequate means of accomplishing a desired end.

Very early in his chemical training, the writer was forcibly introduced to the Monroe Calculator. It happened in this way. The calculations for glycerine analysis were being laboriously done on each sample by the slide rule method and when the month-end inventory came around the problem became very acute.

Generally two persons checked one another's work, thus doubling the time consumed. The writer then conceived the idea of setting up a scale of tables covering the basic titrations for all possible strengths of solutions within reasonable limits. That is when the calculator entered the picture. If memory serves rightly, the job took a Saturday afternoon. Of course, one might say, why not turn it over to the office and let them do it! Very probably that would have meant the end of the project right there, as it is the writer's experience that no one knows the importance of a job of that nature better than



the person performing it. Subsequent experience has shown, that a little knowledge of the tools of business never hurt a chemist or chemical engineer in any way.

Very recently the writer was on a tour through a very large research laboratory devoted to analysis of detergent materials. In one corner of the lab he noted a large IBM sorting machine located right beside a spectrophotometer. The IBM unit was used as a means for quickly identifying the curves obtained from spectrophotometer. An analysis that might consume days or weeks was done in a matter of minutes.

Modern chemistry uses every device obtainable to achieve its purpose and machines generally classed as business equipment play an important role. A few brief observations on the recent exhibit may prove of interest here.

Filing systems using card indexes held in metal frames in cabinets were exhibited by Acme Visible Records, Inc., Crozet, Va., and Globe-Wernicke Co., 220 East 42nd St., New York 17, N. Y. These systems are useful for classifying products, locating producers, keeping notes of processor or preparing bibliographies.

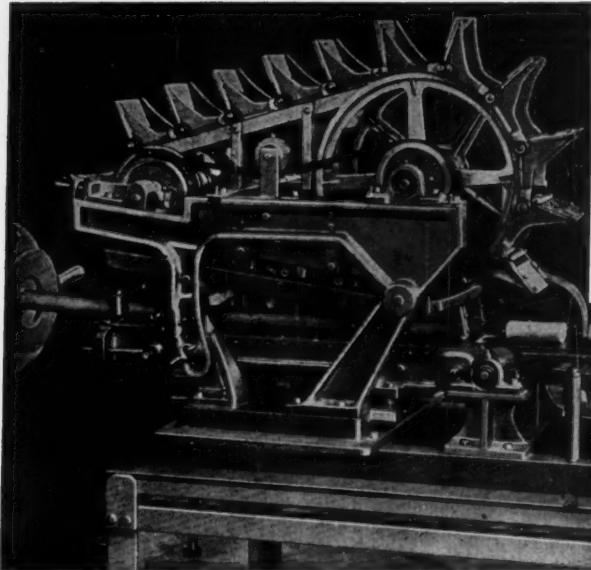
Electric typewriters — The

I.B.M. executive machine with "Text" type is very useful for bibliographies or abstracts of chemical data where duplication is necessary and the space used must be small yet legible. The I.B.M. machine differs from the regular typewriter in giving greater space to wide letters such as the "m" and less space to such letters as the "i" and "t" etc.

Numerous duplicating devices were noted, particularly small photo copying machines. An engineering plant recently visited prepared duplicate copies of a rather lengthy contract by such a machine within a matter of minutes, and the copy did not require any proofreading. A few such devices noted at the show include the "Transcopy Duplex" of Remington Rand, the "Thermo-Fax Duplicator" of Minnesota Mining and Manufacturing Co., the "Ozalid Bambino" of General Aniline & Film Corp.

An office intercommunication device, the "Vocatron," would be useful where walls separate two laboratories. A pair of instruments which plug into any AC outlet cost \$84.75. The units are made by Vocaline Company of America, Old Saybrook, Conn.

For the draftsman, a device for automatic ruling of lines at any angle and with any type of uniform spacing was exhibited. Called the "Paraliner," it is made by the Michael Lith Co., 145 West 45th St., New York 36, N. Y. and sells in four sizes ranging from \$86.50 to \$130.50. Another very useful device for laying out engineering projects, illustrating market reports or planning laboratory lay-outs was sold by Chart-Pak Inc., 104 Lincoln Avenue, Stamford, Conn. It consists of rolls of adhesive tape carrying a wide variety of black lines or objects on a white background. Besides saving innumerable hours of a draftsman's time, it permits the person making the lay-out to rapidly change and recharge the chart as many times as desired and yet produce a clean artistic result which is satisfactory for duplication purposes.

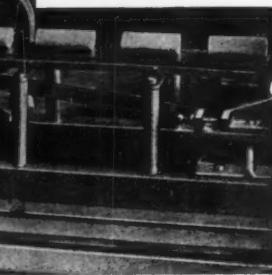


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Sonneborn Scrapbook - 1943

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Q UITE some time ago, the writer reported on the "Fil-mill" made by the Micro Processing Equipment Co., Savage, Minn. At that time it was stated that the actual operation of this equipment had not been observed. While in Minneapolis recently on a U.S.D.A. assignment, the writer took time out to visit the delightful little village of Savage, about 30 miles southwest of Minneapolis, and see this equipment demonstrated. Mr. Marshall, the inventor, spared no pains to show just what the machine would do and there is no question in the writer's mind, that the equipment will do exactly as Mr. Marshall claims.

Soap was observed going through the heavy duty gear extruder and through the "Fil-mill." In certain cases, the gear extruder itself is capable of unusual application in the detergent field and should prove of extreme interest to synthetic bar soap manufacturers who desire to use a type of material not capable of being handled in the ordinary soap plodder.

It is not possible in the space allotted here to detail all the information made available, and an attempt to do so would only confuse the reader. Of special interest is a device designed by Micro Processing Corp. to test the viscosity of bar detergents. A plug of soap is inserted in a steel receptacle and a certain portion displaced by a steel plunger entering under great pressure. The motion of the plunger is arrested electronically when it has penetrated a predetermined amount. The viscosity of the bar is then calculated to an arbitrary figure by multiplying the time of motion in seconds by the pressure exerted on the plunger in pounds per square inch.

An eight percent moisture toilet bar given a regular milling will yield a viscosity figure of between 150 and 250 pound second. The same soap milled on the "Fil-mill" will yield a 300 to 425 pound second viscosity indicating that it is considerably harder. On 12 percent moisture soap there is no dif-

ference between the two types of milling as shown by the above test.

* * *

VOLUME 1 of a new two-volume book on "Soap Manufacture" by Davidsohn, Better and Davidsohn has just made its appearance, through Interscience Publishers, New York. This first volume deals in some detail with (1) the theoretical principles of soapmaking, (2) the raw materials used, (3) the boiling process, and (4) special products. The writer is in the peculiar position of not only being the co-author of another book on the subject (Soaps & Detergents—MacNair-Dorland Company) but also in having helped in the preparation of the above by reading and revising the original manuscript. Basically, the difference between the two works is essentially one of scope. Dr. Thomassen and myself kept our work brief by omitting all but the essential references to the theoretical aspects of the subject. Davidsohn *et al.*, on the other hand deal extensively with behind the scenes reasons for each operation and for this reason, the book will appeal particularly to research men in this field. The authors bring a wide range of practical European experience to bear on their subject and the result often gives a side light on an unusual process which might otherwise be overlooked.

— ★ —

Booklet on Grace Chemical

The formation of Grace Chemical Co., New York, which will initially produce nitrogen in the form of ammonia and urea, is described in a 20-page booklet announced recently by the company. Grace Chemical Co., the parent company of which is W. R. Grace & Co., is building a \$20,000,000 plant at Memphis, Tenn. In addition to forewords by C. E. Wilson, chairman of the board and W. P. Gage, president, the booklet describes the aims and purposes of the new concern, lists its officers and directors, tells the growing pace of chemistry in our economy, as well as outlining the specific uses of urea and ammonia.

Trace Iron Control Agent

"Versen-OL" is the trade name of a new chelating agent for trivalent iron which should prove of interest to processors of soaps and other materials where trace iron is a problem. The new compound, a product of the Bersworth Chemical Co., Framingham, Mass., is the tri-sodium salt of N-hydroxyethylene diamine triacetic acid. High water solubility and stability throughout the pH range are claimed for the product. It forms strong 1:1 ferric chelates and prevents hydrolytic decomposition even in strongly alkaline solutions. Any "Versen-OL" remaining after chelation of the iron present is said to inactivate other heavy metal or alkaline earth ions until exhausted.

Patents on the new product are pending and it is currently available in commercial quantities. Research samples may be obtained by written request.

New Detergent Material

Sulfonated olive-seed oil is found to be a satisfactory technical detergent. Oils of different acid values were sulfonated with sulfuric acid of different concentrations. Effects of the sulfonated products on surface tension of water, foam formation, emulsifying power, and efficiency in cleaning cotton cloth are recorded. Carlos Gomez Herrera and Srta. Rosario Guzman Garsia, *Grasas y aceites* 3, 23-34, through *Chem. Abstracts*, Vol. 47, page 12843.

Aromatics

(From Page 41)

Having experienced at first hand the advantages of becoming basic, careful thought was given toward extending this program to manufacturing primary aromatic chemicals and floral products necessary for both old and desired new lines. After further study and planning, it was decided to go forward with this expansion program, which would serve as a stepping stone toward actually becoming a

commercial chemical manufacturer.

Removal to a new plant and expanded facilities, together with the acquisition of additional chemical and engineering personnel at this time, started the ball rolling. The first chemicals were produced for captive use in late 1950.

First of these basic chemicals produced were eugenol, U.S.P. and isoeugenol. Immediately after production bugs were worked out of these two related aromatics, a third basic product, benzyl alcohol, was manufactured, followed soon by the development of heliotropine.

As product diversification and plant expansion were progressing with the close cooperation of the laboratory, a growing research department was beginning to play a more important role in the program. Already, "old" processes had been modified to increase yields and reduce operating time and materials handling. But something fundamental and revolutionary was under way in the research laboratories; indeed, this development had been one of the first problems presented to research and was being carried out concurrently with other chemical division progress. This research and development program, described below, served as a major stepping stone in Shulton's entry into the fine chemicals field.

One of Shulton's early aims had been the development of a white scented toilet soap which necessitated the addition of a vanilla-

type odor complex. Such soaps were not uncommon—but white soaps of this type were nonexistent. This was true because the vanillin or vanilla perfumes used for this purpose were color unstable and changed sufficiently during process to turn the soap brown.

After months of research, during which numerous compounds were prepared and evaluated, an extremely pure form of propenyl guaethol was prepared and found to be the answer. This material, marketed under the name of Vanitrope, was actually a tailor-made molecule, the end product of fundamental research.

Although the synthetic was successful as a stable vanilla scenting agent for soap, it was also found to have application as a vanilla flavoring agent.

The synthetic was first successfully manufactured on a commercial scale in early 1951. In the same year, additional aromatic chemicals were produced. Among these were anisic aldehyde, terpinyl acetate, benzyl acetate and benzyl benzoate. And, as in the case of the first made materials, they were initially for captive use only. But as production capacity increased, these materials also were offered commercially.

Intermittently, as the previously mentioned products were

being produced, certain special floral products followed.

The Fine Chemicals Division has just recently brought out a true rhodinol, synthetically made and marketed at approximately half the price of rhodinol isolated from geranium bourbon.

The latest Shulton development is an extremely powerful product having a geranium-like character. Two grades of this material are being produced, namely, geranic ether technical, recommended for use as an industrial odorant, and geranic ether, soap grade, recommended for soap work, as the name implies. Although application studies are still being made on this product, pilot plant samples are being offered to the trade.

Probably the one single thing that has been most responsible for the rapid growth of Shulton's Fine Chemicals Division has been research. Research has always played a major part at Shulton. And personnel growth of this department has been paced by procurement of the latest research tools and instruments. The finest, completely automatic infrared spectrophotometer, to name only one unit, has recently been acquired. The purchase of this unit and its installation in a new, separate, air-conditioned laboratory, was effected at a cost of approximately \$20,000. As an instrument of control and research, the "Infrared" has already proven itself invaluable.

Press group visiting new plant and laboratories at Union Beach, N. J., last month, of Van Ameringen-Haebler, Inc., New York.



Sanitary Chemicals Section

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...that nearly *polished off* the customers

Housewives raved about the glossy sheen this polish put on their furniture. But they wrinkled their noses at the unpleasant residual odor that lingered after the job was done.

Sales went down!

The problem was put up to the MM&R Technical Service Department. They

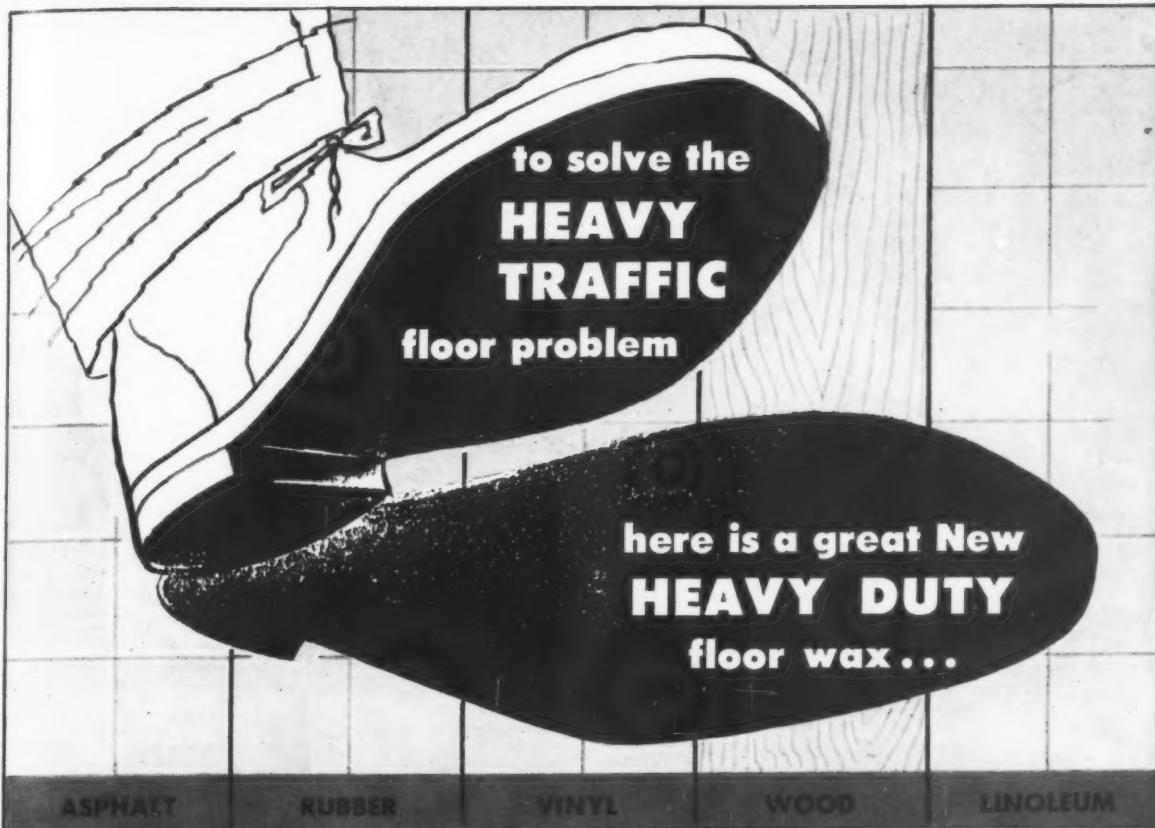
quickly found a formula that would neutralize the offending odor. Today, this is one of the country's leading furniture polishes.

If "smell" is keeping the "sell" out of *your* product, let the MM&R Technical Service Department analyze it and give you their recommendations. No obligation, of course.



Magnus, Mabee & Reynard, inc.

Since 1895 ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS
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Super Lightning Lustre by Federal has been designed to meet the needs of the increasing number of quality-conscious wax users who must solve the severe maintenance demands caused by frequent heavy traffic on all types of floors.

A self-polishing wax of extreme toughness, durability, and resistance to wear, Super Lightning Lustre dries to an extremely high gloss because the *gleam is built in*. It covers the surface longer, greatly reducing the number of applications required in a given period . . . and its unusual buffing properties permit frequent polishing between Super Lightning Lustre coats.

Water resistance to the highest degree is achieved in a matter of minutes, yet Super Lightning Lustre can be removed completely from the surface it protects.

For long life under the most extreme wear conditions, Super Lightning Lustre will, on comparison tests, prove its superiority.

(Available in Regular Heavy Duty or with Ludox* for additional anti-slip properties.)

*Trade mark of E. I. DuPont de Nemours & Co., Inc., Reg. U. S. Pat. Off.

If you'll try and compare,
 we'll be happy to send you a
 free sample of Super Lightning Lustre.



FEDERAL VARNISH DIVISION Dept. 10

2841 S. Ashland Ave., Chicago 8, Ill.

Yes, I'll really apply and test Super Lightning Lustre, and compare results with my present wax. Please send me a free sample of Super Lightning Lustre.

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City _____ State _____

SUPER LIGHTNING LUSTRE

by

Federal

VARNISH DIVISION

2841 S. Ashland Ave., Chicago 8, Ill. *The Pioneers in Floor Sealers - Finishes and Waxes*

Tailor-made



New U.S.D.A. rules for approved aerosols
As might be expected, MGK is first to offer aerosol formulations to meet the new standards. During the past several months hundreds of aerosol tests have been made to establish which formulations meet the new standards. Some extremely surprising facts have been revealed. For information about formulations which meet the new standards, send for MGK Technical Bulletin No. 11. When you write for the bulletin, send us your present formulation. We may be able to suggest changes which will please you.

ead or roll-your-own

Aerosols

Some manufacturers use complete formulations, tailor-made to their private specifications. Others like to roll-their-own aerosols from separate ingredients. Still others take a middle-of-the-road position and buy partial formulations.

As the use of insecticidal aerosols has grown, a large majority of these manufacturers have obtained their formulations or their toxicants from MGK. We like to believe that the fine quality of our allethrin and pyrethrum, the high efficiency of Super-Synergist 264, plus the MGK aerosol "know-how" is the reason for these purchases.

THERE IS NO SUBSTITUTE FOR OUR EXPERIENCE

A survey indicates we have had more insecticidal aerosol formulations registered than any other producer. The record shows that we have supplied completed formulations or toxicants for the majority of the many millions of aerosols already filled. The experience and "know-how" gained in 51 years of business is available to your company. Write us about your insecticide aerosol problems.

Save the Scientific way with MGK

McLAUGHLIN GORMLEY KING COMPANY

1715 S. E. FIFTH STREET
MINNEAPOLIS, MINNESOTA



MEMO

*Tear out as
a reminder to*

WRITE TODAY TO MGK
*for Technical Aerosol
Bulletin No. 11*

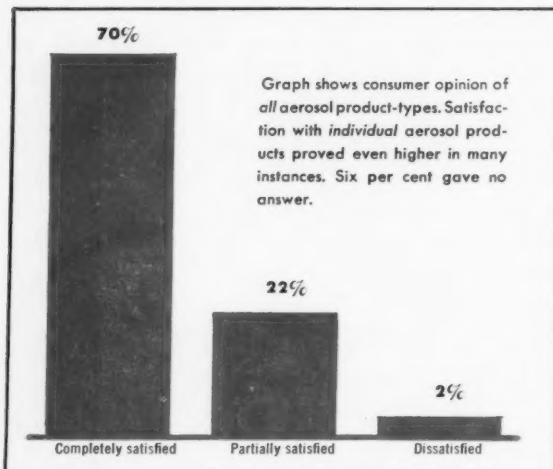
Big Swing to AEROSOL

Latest Du Pont Market Survey

7 OUT OF 10 USERS COMPLETELY SATISFIED

Tabulation of reports from 2600 families questioned during the Du Pont Company's sixth nation-wide consumer market survey covering aerosol-packaged products has now been completed. Once again it proves consumer preference for aerosols.

As shown in the graph below, of those who have purchased and used one or more aerosol product-types, 70 per cent (7 out of 10) stated that they were completely satisfied with the product. Only 2 per cent claimed they were dissatisfied.



In answering the 6-page questionnaire, consumers in all 48 states revealed many important facts both about the market for aerosols and the aerosol method of dispensing various familiar products. Seven of the most popular of these products include the following: insecticides, household deodorants, paints, "Christmas snow," personal deodorants, hair lacquers and shave cream. In each answered questionnaire, consumers reported whether or not they had ever used these product-types packaged in an aerosol dispenser. If so, what did they think of the product . . . where had they made the purchase . . . how frequently did they buy products of this type . . . and what were their reasons for being satisfied or dissatisfied with it. Interesting to note is that more and more consumers in all age groups, income brackets and geograph-

ical locations are swinging to products that are now aerosol-packed.



AEROSOL HOUSEHOLD DEODORANT USERS INCREASE MORE THAN 100%

The Du Pont market study again points up a substantial increase in the number of users in every aerosol product category. For example, users of household deodorants packaged in aerosol containers increased from 24 per cent in 1951 to 44 per cent in 1953 . . . an upswing of 85 per cent! On the other hand, the number of users of the next most popular package-type of household deodorants declined somewhat. The table below lists several of the reasons consumers gave for preferring aerosol household deodorants.

REASONS FOR CONSUMER PREFERENCES

Quick, speedy	40 per cent
Effective	37 "
Easy to use	29 "
Economical	10 "
Clean, not messy	7 "
Pleasant odor	7 "

While some of the preferences indicated in connection with other aerosol product-types related only to those particular types, in each case the ease of application rated high as one of the most welcome features of aerosols.

The study also included detailed reasons for dissatisfaction, as reported by the relatively few aerosol users who weren't satisfied with the product purchased.

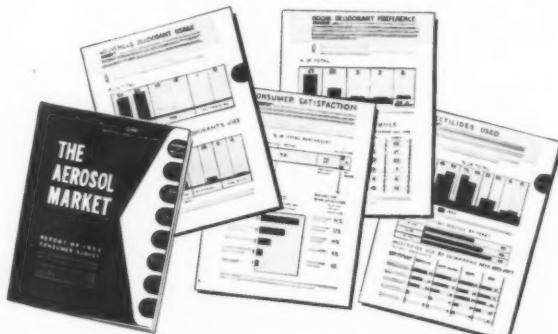
PACKAGING Continues

Proves Consumer Preferences

LEADING POINTS OF PURCHASE

Type of outlet	Per cent of consumers purchasing aerosol insecticides	Per cent of consumers purchasing aerosol household deodorants
Food and grocery stores	31	44
Drug stores	22	14
House-to-house salesman	8	21
Department stores	14	8
Hardware stores	14	4
Auto service stations	6	1
Demonstrations (home)	2	6
Variety, 5 & 10¢ stores	5	3

In answer to the question "Where did you most recently buy an aerosol?"—by far the largest number of respondents indicated that, with respect to insecticidal aerosols and household deodorants, purchases had been made in food and grocery stores. Drug stores were rated next in line as outlets for aerosol insecticides, although note that house-to-house salesmen constituted the second most important point of purchase in the field of household deodorants.



AEROSOL MARKET DATA

Manufacturers of products packaged in modern aerosol containers welcome Du Pont's annual surveys of the markets for these products. These studies are a nationwide cross section of consumer buying habits and provide a pattern helpful in planning marketing and merchandising activities. Because all of this information relative to aerosols concerns everyone interested in the industry, high lights from the current study have been assembled in a comprehensive 32-page digest. This is now ready for distribution, and a copy of it will be

promptly forwarded upon request on your letterhead. Write for it today.

MAJORITY OF AEROSOL MANUFACTURERS USE "FREON" PROPELLENTS

"Freon"** fluorinated hydrocarbon propellents are available to meet specific requirements of pressures, solubility, physical make-up and other characteristics of many basic product-types. They are widely used by manufacturers who have entered this fast-growing industry. "Freon" propellents are also safe . . . nonflammable, nonexplosive, noncorrosive and virtually nontoxic. They are manufactured in strict accordance with intricate, laboratory-controlled procedures. In addition, they are backed by years of Du Pont research in the field of fluorine compounds and are today recognized everywhere for their dependable purity and uniformity.

TECHNICAL AID IF YOU NEED IT

The packaging of a successful aerosol product requires that the propellant and the active ingredient be designed for each other. The Du Pont Company furnishes technical assistance in fitting the proper "Freon" propellant to the other ingredients of an aerosol product. A booklet, "Package for Profit," contains information of interest to anyone considering the possibilities of entering the aerosol business. Write for a copy: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



FREON

SAFE PROPELLENTS

**"FREON" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents.



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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

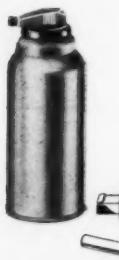
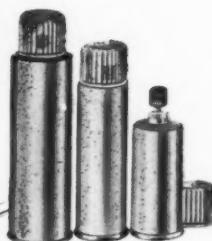
THE *Aerosol Valve* FOR
YOUR PRODUCT *by Precision*



Complete assembled cup type valve for any one inch opening aerosol container. For all aerosol products. Protective domes offered in various colors.



For containers that have the valve mounting portion incorporated. Precision will supply the complete valve and stake the valve into the container end.



The foam type valve complete with dispensing head having its own locking device. . . . Foam type valve with dispensing head and protective dome. Can be obtained in variety of colors.



PRECISION has the answer to your aerosol program regardless of product, container, or filling method.

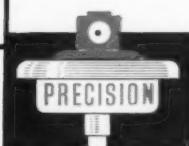
We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.



Offered to those who prefer to use their own button design for aerosols or their own dispensing head for foam products.



Glass container aerosol valve, complete with button and protective dome.



Precision Valve Corporation
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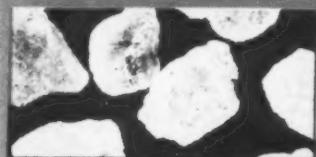
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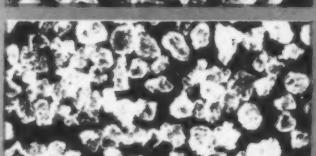
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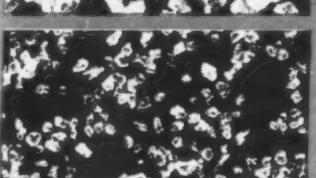
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**Edition of
SOAP & SANITARY CHEMICALS**



COPY is NOW DUE for the 1954 Soap & Sanitary Chemical Blue Book. Many firms have already reserved their advertising positions in the 1954 Annual Edition facing the listings for their most important products.

If you are interested in an advertising position facing one or more of your products, let us know immediately. If the position is open, we shall be glad to reserve it for you. But, now is the time to let us know while some of the positions most in demand are still available!

The 1954 BLUE BOOK will be out March 20 and will go to all subscribers to SOAP & SANITARY CHEMICALS. Copy closing date will be February 10.

For 25 years, the BLUE BOOK has been the standard buying guide for the field of soap and detergent products, insecticides, disinfectants, deodorants, aerosols, floor waxes and other floor products, and other chemical specialties and janitor supplies and equipment. Its advertisements and listings have produced thousands of inquiries and orders.

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If you do not have a copy of the current BLUE BOOK handy, let us send you one to look over. You may find an advertising position of special interest. Advertising cost is low. Drop us a line now to send you a free sample copy and rate card!

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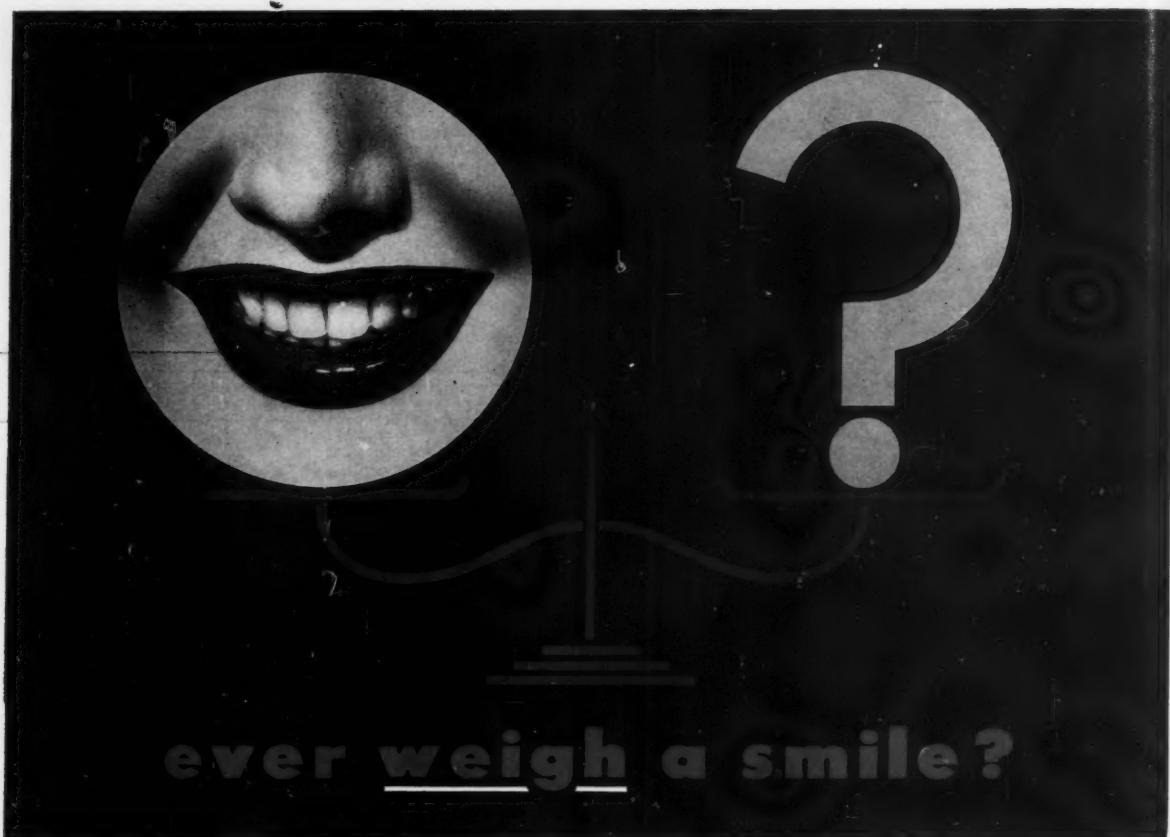
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A smile of satisfaction on your customer's face means PRODUCT ACCEPTANCE

... REPEAT SALES . . . and that weighs dollars!

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Send us a sample of your product, unperfumed. Perfume chemists, skilled in this particular job, will develop and suggest an ideal perfume to meet your requirements . . . odor appeal to bring out that vital smile of satisfaction.

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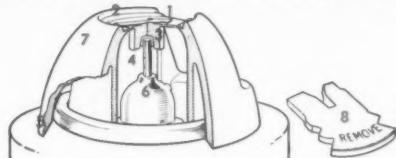


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**March 21, 22, 23, 24
Conrad Hilton Hotel
Chicago, Ill.**

The Officers and Directors of your National Sanitary Supply Association join with me in assuring you of another bigger and better National Convention and Trade Show at the Conrad Hilton Hotel in Chicago, March 21, 22, 23, 24, 1954.

Each year your convention and trade show has grown in size and educational opportunities. This year exhibitors are going all out to bring you the newest in merchandise as well as advanced plans in better merchandising methods.

This year's convention will again stress the "Clinic Approach" to trade show technique. Each exhibitor will have at the disposal of distributors, skilled engineers and technicians, interested primarily in showing the distributor how his product can best serve the consumers' cleaning, maintenance and sanitation problems. By visiting each exhibitor, distributors can be informed of the latest developments and thus be better qualified to serve the best interest of their customers.

You can be proud of the work your Association is performing in your behalf and we look forward to greeting you again in Chicago.

David L. Ginsburg
President,
National Sanitary Supply Association, Inc.

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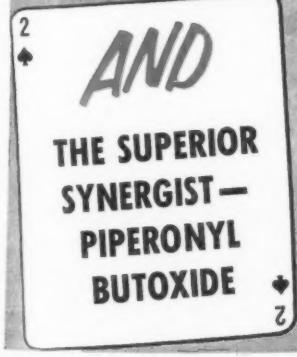
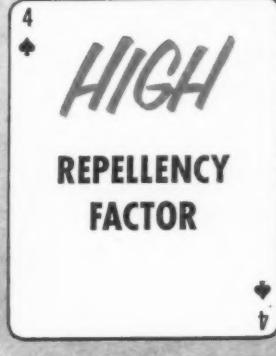
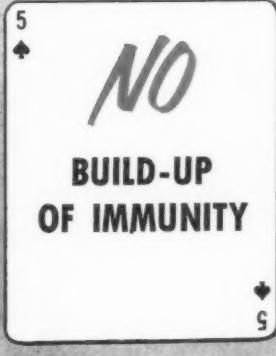
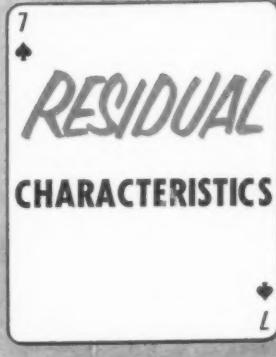
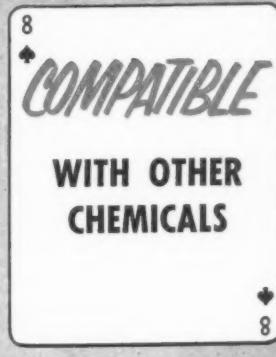
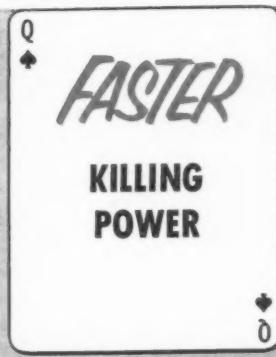
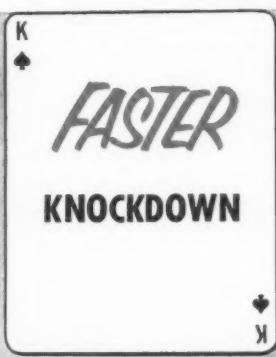


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▲ The new edition will contain more than 200 illustrations—a much larger and more complete volume than the original HANDBOOK by Mallis, published in 1945 and out of print since 1948.

▲ This newest pest control reference volume deals primarily with household and industrial pests, insects, rodents, etc., their habits, identification, and latest methods of control. It is the most complete work of its kind ever offered in a single volume.

▲ Those who have used the original HANDBOOK by Mallis undoubtedly will want this new, up-to-date volume, a standard reference book which should be in the library of every pest control operator, insecticide manufacturer and marketer, entomologist, chemist and others interested in modern materials and methods of pest control.

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SOAP and SANITARY CHEMICALS

HANDBOOK OF PEST CONTROL

by Arnold Mallis

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termites	lice
dry rot fungi	fleas
wood-boring, book boring and related beetles	flies and mosquitos
psocids	spiders
bedbugs and other bugs	mites
clothes moth	ticks
	miscellaneous household pests
	chemicals used in controlling household pests

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254 West 31st Street

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JANUARY, 1954

125



COCKROACH



FLEA



BED BUG

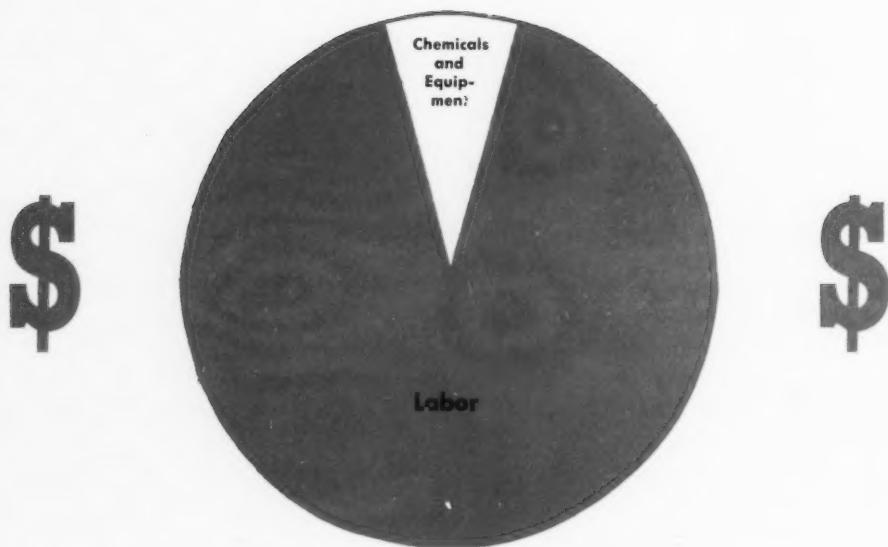


SILVERFISH



FLY

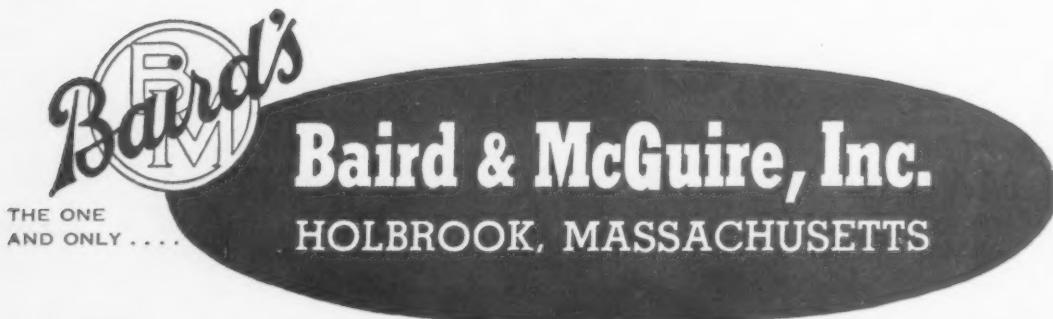
Why Sell Quality



The Maintenance Dollar

The great majority of your customers maintenance dollar is spent on labor, with only a small fraction being spent for chemicals and equipment. Thus it follows that if a reduction in costs is made, the labor area of the dollar is the place to start. Baird & McGuire quality cleaners, waxes, disinfectants and insecticides will enable your customers men to do their job faster, more efficiently, at a lower cost and you will have profitable repeat business.

That is why we at Baird & McGuire have constantly maintained our quality in both old and new products over our 45 years of manufacturing sanitary and maintenance chemicals for the jobbing trade.



C. S. M. A. Meets; Elects Melvin Fuld

CURRENT developments, a preview of the future and a review of the early days of the industry and its trade association were among the highlights of individual papers and group discussions during the 40th annual meeting of the Chemical Specialties Manufacturers Association, held Dec. 7 and 8 at the Mayflower Hotel, Washington, D. C. Registration for the meeting topping 800, with the total attendance close to the 1000 mark, made the affair the largest in the 39 year history of the association.

To add special significance to the 40th annual meeting, two of the three living founders of the association were present and received special remembrances in the form of clock-barometer combination desk sets. So honored were Karl A. Dolge, head of C. B. Dolge Co., Westport, Conn., and M. M. Marcuse, chairman of West Disinfecting Co., Long Island City, N. Y. The third living founder, Fred A. Hoyt of Atlanta, was unable to be present because of illness.

Past presidents of C.S.M.A., and its predecessor organizations, National Association of Insecticide and Disinfectant Manufacturers and Insecticide and Disinfectant Manufacturers Association, met during the 40th annual convention. Their activities and achievements were reviewed in a post-luncheon address by James A. Green of Standard Oil Co. of Indiana, Chicago, a member of the board of governors and chairman of the Insecticide Division of C.S.M.A.

Also honored during the two-day meeting were the winners of the second annual "Aerosol Festival" whose pressurized products packages were judged best in the annual packaging competition of the

Aerosol Division. The second annual achievement award winners, Dr. F. B. LaForge and Milton S. Schechter of the U. S. Department of Agriculture, were honored for their work in the discoveries of the synthesis of organic insecticides including allethrin.

The election of officers and members of the board of governors, an address by Assistant Secretary of Agriculture, J. Earl Coke of the U. S. Department of Agriculture, and the first television broadcast featuring participation by members of the C.S.M.A. in connection with one of its meetings were also among the high points of the annual convention.

Melvin Fuld, president of Fuld Brothers, Inc., Baltimore, and for the past two years first vice-president of C.S.M.A. was elected president to succeed Clarence L.

CAPTIONS

Top: Melvin Fuld of Fuld Brothers, Inc., Baltimore, newly elected C.S.M.A. president, shakes hands with retiring president, C. L. Weirich of C. B. Dolge Co., Westport, Conn.

Second from top: Robert Hollister, American Can Co., New York, Hazel Markel, Mr. Weirich and C. S. Kimball of Foster D. Snell, New York, during television broadcast on WTTG-TV, Washington.

Third from top: Assistant Secretary of Agriculture, J. Earl Coke, center, congratulating Drs. Milton S. Schechter, left, and F. B. LaForge on receiving the 1953 C.S.M.A. Achievement Award for their work in the field of organic chemistry.

Bottom: E. G. Young, Kinetic Chemicals Division of Du Pont, congratulates William H. Cummings, vice-president of Henderize Co., Sacramento, Calif., who holds "Can Spray" aerosol package, which was judged best of show in aerosol contest.



Weirich of C. B. Dolge Co., Westport, Conn., who concluded two terms in that office. Other officers elected for the coming year are Dr. E. G. Klarmann, vice-president in charge of technical services for Lehn & Fink Products Corp., New York, first vice-president; H. E. Peterson, president of Continental Filling Corp., Danville, Ill., second vice-president; Peter C. Reilly, vice-president of Reilly Tar & Chemical Corp., Indianapolis, reelected treasurer, and Herbert W. Hamilton again chosen secretary.

Elected to the board of governors were D. J. Templeton of Stanley Home Products Co., Easthampton, Mass.; T. B. Welch of Gulf Oil Corp., Pittsburgh, and Mr. Weirich, retiring president.

The two-day meeting featured separate, simultaneous meetings of the six divisions of which the association is composed on the first morning of the meeting, Dec. 7 and the afternoon of the final day, Dec. 8. A general session was held following the group luncheon on Monday afternoon, after which two divisional meetings also took place. A general session was held on the morning of Dec. 8.

Opening the Insecticide Division meeting, James A. Green, chairman, in his address in that capacity reviewed the 40 years of growth by the C.S.M.A. He divided the 40 years of the association's existence into three periods: The Beginnings, 1914-1930; The Period of Growth, 1930-1946; The Consolidation Period, 1946 to date. The highlights of the first period, which were factors in bringing it to a close included: the voiding of the Terry patent; the rise of synthetics, the production of pyrethrum concentrates; the improvement of applicators, and the national educational campaign which aroused the public to the fly menace.

The Period of Growth featured the development of the Peet-Grady Test, adopted in 1932; the introduction of the aerosol pressurized sprayer; and the introduction and use of DDT and other organic compounds.

CAPTIONS

Top row: Alfred Weed, John Powell & Co., New York, William Eddy, Rochester Germicide Co., Rochester, N. Y.; C. L. Weirich, N. J. Gothard, Sinclair Refining Co., Chicago; William Flatow, James Marcuse, M. M. Marcuse and Leonard J. Oppenheimer, West Disinfecting Co., Long Island City, N. Y.

Second row: Robert A. Fulton, U.S.D.A.; N. W. Sequist, Sequist Mfg. Corp., Cary, Ill.; R. V. Sharpless, Gulf Research & Development Co., Pittsburgh; Herbert Mellan, Durez Plastics & Chemicals, N. Tonawanda, N. Y.; Gen. Joseph F. Battley, Natl. Paint, Varnish & Lacquer Assn., Washington, D. C.; John Powell, Powell Magazines, New York.

Third row: Ralph Hamilton, and Gordon M. Baird, Baird & McGuire, Inc., Holbrook, Mass.; George Long, W. C. Hardesty Co., New York; M. Weiss, Seaboard Mfg. Co., Newark, N. J.; George Goethius, Rohm & Haas Co., Philadelphia;

Adrien DuBois, West Disinfecting Co., Long Island City, N. Y., and John F. Gain, Sterwin Chemicals, Inc., New York.

Fourth row: Vincent Hall and Don Begley, Reilly Tar & Chemical Co., Indianapolis; Edmond G. Young, Kinetic Chemicals Div., E. I. du Pont de Nemours & Co., Wilmington; Paul Ekberg, R. S. Shumard and Charles Lightfoot, Monsanto Chemical Co., St. Louis, and Charles Hunt of General Chemical Div., Allied Chemical & Dye Corp., New York.

Bottom row: Theodore Heilig, Regal Chemical Corp., Brooklyn; Charles Lichtenberg, Chicago Sanitary Products Co., Chicago; William Weed, Niagara Alakali Co., New York; Thomas Morgan, Soap & Sanitary Chemicals; Jack Varley, James Varley & Sons, St. Louis; Dr. and Mrs. LaForge and Mrs. and Dr. Schechter, U.S.D.A.

The third period of consolidation includes such important developments as the problem of insecticide resistance in flies; the Federal Insecticide, Fungicide and Rodenticide Act of 1947; the broadening of the association's activities and its changeover to the Chemical Specialties Manufacturers Association; and finally the synthesis of allethrin by Drs. Schechter and LaForge.

A review of the research work done at the U.S.D.A.'s Savannah laboratories, Division of Stored Product Insect Investigations, was presented by Hamilton Laudani of the Agricultural Research Service, Bureau of Entomology and Plant Quarantine. He pointed out that for the past few years the following phases of research on the control of insects in dwellings and industrial establishments have been under investigation at the Savannah laboratory: I. Insects attacking processed or manufactured foods and commodities, and II. Insects inhabiting household and industrial establishments. Under I, the U.S.D.A. is investigating the development of: insect resistant packaging materials; treatments to prevent insect damage to bristles, feathers and finished textile products; treatments to prevent insect

damage to building materials; and treatments to prevent insect damage to cured meats. As part of point II, control measures are being sought for insects in the home and for insects in storage and transportation facilities.

The final feature of the insecticide division meeting was a symposium discussion of "Forty Years of Household and Industrial Insecticides." E. I. Griffin, assistant chief, Insecticide Division, Livestock Branch, Production and Marketing Administration, U.S.D.A., outlined conditions existing in the insecticide industry 40 years ago. He also reviewed some of the problems involved in regulations since then leading to the passage of the Federal Insecticide, Fungicide and Rodenticide Act of 1947. Cooperation between state and federal officials and some of the present problems in the administration of the federal law were touched upon by Mr. Griffin. Other U.S.D.A. representatives participating in the panel were M. S. Jacobson, S. A. Hall, R. A. Fulton, R. H. Nelson, F. H. Babers and Dr. H. L. Haller.

A film dealing with waxes for protective packaging, shown by D. W. Robertson of Socony-Vacuum Oil Co., Brooklyn, was the first feature of the Waxes and



Floor Finishes Division meeting, the morning of Dec. 7.

A practical and relatively inexpensive device and a procedure for the evaluation of soil retention by surface coatings such as floor waxes was presented by Kurt J. Wasserman of Trio Chemical Works, Inc., Brooklyn. The device, according to Mr. Wasserman, has been designed so that it can be used with the popular Gardner washability machine, model 105. The paper gave tabulated test results, using the machine, which indicated a comparison of soil retention by anionic, nonionic and cationic wax films, as well as the effect of shellac and colloidal silica on a wax emulsion.

Further evidence that vinyl plastic flooring does need waxing and is improved in appearance and preserved and protected by such treatment was presented by Cyril S. Kimball of Foster D. Snell, Inc., New York. This evidence was presented in a paper, "The Effect of

the Use of Floor Wax on Vinyl Flooring," by Kimball, Dan Schoenholz and George D. Burns. The report, the first part of which was presented at the 39th midyear meeting of the C.S.M.A. in May in Chicago, is based on extensive floor service tests. These tests, the authors contend, demonstrate that the appearance, cleanliness and protection of vinyl flooring are greatly improved through the use of floor wax.

The vinyl plastic flooring products of several leading manufacturers were used in the tests conducted in areas of both moderate and severe foot traffic. Waxed and unwaxed tiles were shifted periodically so that each would be subjected to the same amount of wear and all of the flooring was examined daily.

The report emphasized that waxing vinyl plastic flooring will:

- 1.) Provide a great improvement in gloss.

- 2.) Aid in maintaining gloss.
- 3.) Help to preserve and protect the tile surface.
- 4.) Reduce soiling and soil embedment during use.

Mr. Kimball said that after considerable use, the waxed tiles showed "significant superiority" over the unwaxed tiles in brightness and, therefore, in cleanliness. He showed photographs which, he said, showed "quite conclusively that far fewer scratches are present on the tiles which were waxed than on the unwaxed."

At the group luncheon, attended by 575, on the first day of the meeting Clarence L. Weirich presided. Following the introduction of officers, members of the board of governors and guests at the head table, Mr. Weirich presented Karl A. Dolge and M. M. Marcuse, two of the three still living founders of the association, with combination clock and barometer desk sets. Both men spoke briefly

Top row: l. to r.: Melvin Fuld; Donald King, Masury-Young Co., Boston; Bayard S. Johnson, Franklin Research Co., Philadelphia, and Gerard R. DeNapoli, Masury-Young; B. W. Young, Wax &

Rosin Products, New York, and A. E. Budner, S. C. Johnson & Son.

Bottom row: Robert Lockhart, Candy & Co., Chicago; William Jessop, U. S. Sanitary Specialties Co., Chicago; Earl

Brenn, Huntington Laboratories, Inc., Huntington, Ind.; Thomas, Peter C. and Frank J. Reilly of General Electric, Reilly Tar & Chemical Co., Indianapolis and Soap and Sanitary Chemicals, respectively.



and thanked the organization for their remembrances. Mr. Marcuse cited the progress the industry had made through its scientists, and mentioned the development of products by the specialties industry that make people healthier and happy. In the early days of the association, he recalled, a big problem was the adoption of standards and tests for disinfectants. Another problem for the industry was the curbing of the giving away of premiums to buyers. The problem has been settled with dignity, Mr. Marcuse said. He wished the organization which he helped to found, continued success and heartiest good wishes.

Following the election of officers, James A. Green of Standard Oil Co. of Indiana, Chicago, presented past presidents of the association, and reviewed their achievements, and those of the other presidents who were not present. Ten of the 13 past president still living were present. A special award was presented to Dr. Robert C. White, of Robert C. White Co., Philadelphia, president of the association in 1930-31.

The concluding event of the luncheon was the announcement of

the winners in the 1953 aerosol package contest. Names of the winners and photographs of their products appeared in the December issue of *Soap & Sanitary Chemicals*.

The opening feature of the meeting of the Soap, Detergents and Sanitary Chemicals Division, the afternoon of Dec. 7, featured a paper on the "Fatty Alcohols as Surfactant Raw Materials" by Dr. David B. Hatcher and Vincent A. Sullivan of Stepan Chemical Co., Chicago. Dr. Hatcher presented the paper.

"The Effect of Electrolytes Upon the Performance of a Homologous Series of Nonionic Surfactants" was discussed next in a paper of that title by C. M. Knowles and Fred Krupin of Antara Chemicals Division, General Dyestuff Corp., New York. In the paper, which was presented by Mr. Knowles, it was pointed out that previous work has shown that a certain hydro-

Dr. LaForge, H. L. Haller, U. S. Department of Agriculture, and Dr. Schechter, and Melvin Fuld, C.S.M.A. president holding aloft portrait of retiring president C. L. Weirich. Bottom row: Mr. Fuld, seated, assistant Agriculture Secretary J. Earl Coke, and assemblage at luncheon during Secretary Coke's address.

phobe-hydrophile balance (i.e., average mole ration of ethylene oxide to hydrophobic material) is necessary in order to obtain maximum performance from polyoxyethylated nonionic surfactants. It has also been demonstrated that the mole ratio of ethylene oxide to base material required for a given hydrophobe-hydrophile balance will vary with the distribution of the various molecular species which make up the average mole ratio.

Current work indicates that the amount of ethylene oxide necessary for the proper hydrophobe-hydrophile balance of certain nonionic surfactants also depends upon the composition and temperature of the aqueous system. The wetting and foaming properties of a series of ethylene oxide derivatives of nonylphenol were studied in distilled water and in solution of various electrolytes. Within certain limits, the performance of these products may be predicted from their cloud point providing the cloud point determination is realistic.

The use of a high intensity mechanical refiner for use in milling soap was described by the next speaker, Donald E. Marshall of





CAPTIONS: FACING PAGE

Top row, l. to r.: A. G. Peck, Peck's Products Co., St. Louis; Al Candy, Candy & Co., Chicago; William Jessop, U. S. Sanitary Specialties Co., Chicago; H. W. Hamilton, C.S.M.A. secretary, Gen. Joseph Battley, National Paint, Varnish & Lacquer Assn.; Paul Hiller, International Minerals & Chemicals Co., New York, and George Bates, Solvay Process Division, Allied Chemical & Dye Corp., New York.

Second row: Albert Selig and L. B. Joel, Selig Co., Atlanta; R. E. Horsey, Sindar Corp., New York; Charles Concanon, Nat. Production Authority and Harold Noble, S. B. Penick & Co., New York; Thomas Reilly, General Electric Co., Waterford, N. Y., and A. E. Budner, S. C. Johnson & Son Co., Racine, Wis.

Third row: Amos E. Badertscher, McCormick & Co., Baltimore; Frank Nelson, Esso Standard Oil Co., New York; Fred R. Geib, Dow Chemical Co., Midland, Mich.; T. M. Ritchie, Hercules Powder Co., Wilmington, Del.; Henry Frazin, Central Can Co., Chicago; Frier Thompson, Athens, Ga.; H. W. Moburg, Rex Research Corp., Toledo, and T. B. Welch, Gulf Oil Corp., Pittsburgh.

Fourth row: Paul Torpin, McLaughlin

Gormley King Co., Minneapolis; Robert Peterson, Continental Filling Co., Danville, Ill.; Milton Blank, Trio Chemical Works, Inc., Brooklyn; John T. Nichols, Rohm & Haas Co., Philadelphia; George Schumacher, Velsicol Corp., Chicago, and J. S. Barker, Rohm & Haas, and Harold Lederer, R. M. Hollingshead Corp., Camden, N. J.

Fifth row: Robert Holdworth and C. Earle Kimble, E. I. du Pont de Nemours & Co., Wilmington, and Richard J. Roach, Reichhold Chemical Co., White Plains, N. Y.; John Weiller and Carter Parkinson of McCormick & Co., Baltimore; H. W. Hamilton, C.S.M.A. and James A. Green, Standard Oil Co. of Indiana, Chicago.

Bottom row: Herbert Mellan, Durez; Joseph Green, Oil Specialties & Refining Co., Brooklyn; John Wilson, Pennsylvania Industrial Chemical Corp., Pittsburgh; R. J. Crockett, Oil Specialties Co.; Harold Abbott, Ultra Chemical Works, Paterson, N. J.; Louis Wells, Peck's Products Co., St. Louis; Richard Young and Fred Buck, Ultra; Fred Lanners, Economics Laboratories, Inc., Minneapolis; Wiley Pickett, Stepan Chemical Co., Chicago and Robert J. Roberts, Emery Industries, Inc., Cincinnati.

point and dew point studies of Kraft and McBain and was brought up to the most recent investigations, including X-ray, light scattering and streaming birefringence. The question of micelle structure in solutions of nonionics was discussed. The talk concluded with a consideration of the importance of purity of materials in physical chemical studies of detergent systems. Examples were given of the radically different behavior of pure and impure

(Turn to Page 153)

CAPTIONS: THIS PAGE

L. to r. counter clockwise: Newly elected president, Melvin Fuld, addresses luncheon as George W. Fiero looks on. C. L. Weirich, center, with founders Marcuse, left, and Dolge, at right. James A. Green reviews list of past C.S.M.A. presidents. Dr. R. C. White receives award from Mr. Green.

Three bottom photos were taken during presentations of Achievement Awards to Dr. LaForge and Dr. Schechter, left and right, respectively, in photo at extreme left. George W. Fiero, who made Achievement Award address looks on at right.







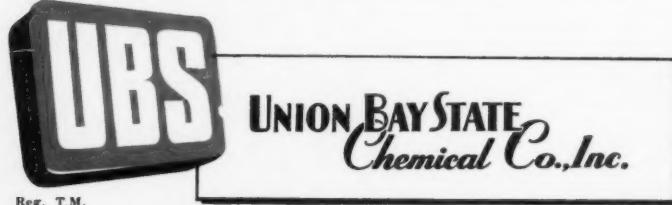
A Polymer Emulsion designed specifically for the floor wax industry.

U2001 Ubatol is a modified vinyl polymer in a compatible dispersion system featuring fine particle size. (less than 0.03 micron.)

When U2001 Ubatol is used as the base around which you build your self-polishing formulations the result is improved gloss, durability, good leveling, soil and abrasion resistance. Such finishes have excellent water resistance yet are easily removed.

U2001 Ubatol has met the demand for "high polymer content" floor finishes for both household use and industrial maintenance.

UBS laboratory testing services are available to you in the application of this tested and proven base formulation.



491 Main Street • Cambridge 42, Mass.



Exterior of office and warehouse building of Navy Brand Products, on fringe of St. Louis business district. Firm was

formerly St. Louis Janitor Supply Co. At right, Sol Herzfeld, vice-president in charge of sales, with Alfred Richter.

Mailings Build Jobber's Sales

AFAT envelope of weekly sales bulletins, bristling with information on its products and how to sell them, is mailed to its salesmen together with their pay checks by Navy Brand Products, (formerly known as St. Louis Janitor Supply Co.) of 2025 Washington Ave., St. Louis, Mo.

The mailing consists of practical, bread-and-butter stuff that the men out to produce volume can readily appreciate. There's the *Idea Exchange* taking up such problems as "what do you say to the prospect

Mr. Herzfeld, below (standing) discusses features of automatic dishwasher cleaner to a new salesman. Salesman

By Albert S. Keshen

who insists 'I know all about it, when I'm ready to buy I'll let you know.' Or a page on how to sell oil and dirt emulsifier to bus company and school bus contractors. Details on processes which will help to educate the prospect are given frequently.

Internal pep talks, distributed in this manner, as well as surveys of the staff as to what they like most about the business and personal items on their activities

help stimulate morale. A page of jokes appears now and then to help relieve the selling tension and put prospects in a better buying mood.

All of this material is prepared by Sol Herzfeld, vice-president in charge of sales, who is benefiting by his training in photography and journalism in applying these fundamentals. In addition he has a sound knowledge of the detergent industry, all of which he uses to spark his organization's selling drive. The bulletins are multi-lithed, sometimes illustrated

(right) demonstrates insecticide disperser to customer in photograph at right.



**Selling punch
for your insecticides...**



**FAST KNOCK-DOWN AT LOW COST WITH
LETHANE 384**

Customers judge your insecticides by their knock-down speed and effectiveness. LETHANE 384 assures maximum knock-down efficiency. And today it is still the fastest knock-down ingredient per unit of cost.

Consider its use in:

HOUSEHOLD LIQUID SPRAYS—Low, economical concentrations of LETHANE 384 in household sprays complement the insecticidal power of chlorinated compounds with fast knock-down.

AEROSOL PRODUCTS—LETHANE 384 is compatible with all ingredients approved for use in household

insecticide aerosols. A concentration of only 2% helps to give high knock-down—at unusually low cost.

CATTLE AND DAIRY LIQUID SPRAYS—When LETHANE 384 is used alone, or with a suitable chlorinated insecticide, it gives fast-acting, high-kill products for use on livestock, and in dairy barns and milk rooms.

CHEMICALS FOR INDUSTRY



**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

LETHANE is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.



Warehouse clerk, at left in photo above, goes over manifest with driver of one of the firm's delivery trucks. At right,

merchandise is loaded into truck for delivery. An electric lifting device, as shown at extreme right, is used.

with a sketch or two, and punch-holed to keep in loose-leaf folders.

"Our primary purpose with these weekly mailings is to keep our men keyed to maximum efficiency by showing that we have an interest in their efforts and are out to keep them always up-to-date on what's going on in the industry," explains Mr. Herzfeld. Sales bulletins give some indication of how the business operates and thus make salesmen feel that they are a part of it. By mailing bulletins to the salesmen's homes with their pay checks means keeping wives equally informed, and we all know how important that is in any household."

Sol gets his ideas from many sources. He studies manufacturers' literature, reads business publications and current news magazines, diagnoses product experiments at the company's laboratories, or goes back to his own experience to come up with interesting anecdotes or sidelights. He also benefits from attendance at national conventions.

Cover Wide Territory

ROUTING to the mails to reach its salesmen is necessary for Navy Brand because of the large territory covered by the firm. This means infrequent calls to the office by salesmen, some of whom, in fact, never get there at all. They are visited at distant branches at periodic intervals. The company covers an area of about 300 miles

from St. Louis, extending to Kansas City, Chicago, Indiana and down to Memphis.

The weekly mailings also supplement the issuance by the company of photostatic folders on some of its choice products. These folders are published every few months and detail such popular items as quality brushes, floor and cement cleaners.

Another important advantage of contacting salesmen regularly by mail is that it helps break in new men and thus is a valuable part of the training program. Navy Brand has instituted its own instruction procedure which has reduced turnover to a minimum and resulted in happier personnel. The program gets the men off to a good start at the beginning and puts them in a good frame of mind and thus makes them better producers.

Recruiting of salesmen is done through the usual channels of employment agencies and newspaper advertising. Most frequently, however, new salesmen join the firm as a result of personal recommendations made by existing staff members. Navy Brand has a policy of not taking on men who are working for a competing company. The firm also prefers applicants who have had no prior experience in the sanitary supply field.

New sales trainees must undergo a three-week probationary period before they can be considered

permanent employees with a drawing account. During the first and second weeks they make calls with an experienced salesmen at a location away from St. Louis where they spend most of their time listening and learning. In the third week trainees are taken to their future territory, where under supervision, the new salesman does all of the talking, being interrupted when necessary by his mentor.

When a salesman is selected by the firm he receives all of the needed paraphernalia such as brief cases, sales kit and price-book. His name is imprinted on all of these. Photostatic testimonial letters from satisfied users are included as part of the sales kit. These selling aids not only impress both salesmen and prospect, but have been a means of acquiring new salesmen who are impressed with the company's standing through such indorsements.

"But one of the big reasons for the success of our training program is that it is continuous," points out Mr. Herzfeld. "We can always learn in this business. So our mailing effort can also be considered an important adjunct of our training program since it sets up 15 basic problems from week to week and tells how to overcome them. By keeping salesmen posted as to what's going on in the trade we provide an educational effort which also pays big dividends."

PROTECT



By using only the original

QUATERNARY AMMONIUM GERMICIDE



SANITIZING AGENT
In your compounds and formulations

Made under rigid laboratory controls that guarantee
POTENCY • UNIFORMITY • QUALITY

Quaternaries are being used more and more as
germicides and fungicides in widely diversified fields:

Restaurants
Taverns
Soda Fountains
Dairies
Milk producers
Poultry farms
Food Processing plants
Egg Breaking
and Drying plants

Refrigeration plants
Frozen Food Packers
Bakeries
Fisheries
Bathing places
Barber Shops
Beauty Salons
Hospitals
Laundries

NOW OFFERED
TO MANUFACTURERS IN
50% CONCENTRATION

Sample and literature on request

Sterwin Chemicals, Inc.

SUBSIDIARY OF STERLING DRUG INC.

Branches in principal cities
throughout the United States.

Forums are held on Saturdays for the staff of 20 salesmen who can conveniently reach the office. During these meetings salesmen can discuss common problems, get personal advice, hear a manufacturer's representative.

Mr. Herzfeld keeps close tabs on how salesmen are doing by maintaining his own tally sheets with a running daily account of orders being turned in. This is not only a means of internal control, helping him to check on and improve the weak spots when needed, but is appreciated by the staff as it shows them that a personal interest is being maintained in their affairs. This interest extends beyond more than business problems. It includes rendering assistance on personal matters such as finding an apartment, making a temporary loan, adjusting family difficulties whenever possible, and a lot of other "little things" which are important in keeping personnel happy and so enabling them to render maximum efficiency.

Emphasize New Products

CONSIDERABLE emphasis is placed on promoting new products. A contest to find an appropriate name for a new brand illustrates the intensity of this effort. Customers were invited to name a new water-base dust-mop treatment with a wrist-watch as first prize. Another wrist-watch was given to the prize winning customer's salesman. Entry blanks were limited to those purchasing five gallons or more of the material and a 60-day deadline was set. The winner was a woman who came up with the title of "Mighty Mite."

Production quota contests are held for the salesmen about every two months. Occasionally the salesmen are asked to set up their own sales goals for a given period. Sometimes they come up with sales figures which surprise even the executives. If salesmen make their quotas, their families are treated to an evening out with a free dinner at a leading hotel. In the latest contest, every salesman on the staff

was a prize winner.

Navy Brand considers itself to be one of the largest distributors of janitor supplies in the Mid-West, a reputation which is based on its steady growth since the firm's inception back in the gaslight era of 1910. Most of the company's activities are in the distribution field, as the regional outlet for nearly all well-known nationally advertised brands of sanitary supplies.

Navy Brand's market for such items includes such large volume users as buyers in hospitals, churches, schools and other institutions, office buildings, manufacturing and other industrial plants, and chain and department stores which buy sanitary products for their own use and not for resale. Navy Brand Products specializes in liquid dish-washing compounds. The firm also supplies a cost control dispenser, on which it holds original patents. This item is sold principally in the restaurant field.

Navy Brand Products is doing more of its own manufacturing. At a nearby factory location the company produces its own Navy Brand floor cleaners, hand soaps and detergents. These are sold in standard drums as well as five-gallon containers, lithographed with the red, white and blue traditional design.

Since it caters to large users with purchasing agents rarely calling at their office and having very little walk-in trade, Navy Brand has not found it necessary to maintain an elaborate showroom. Some of the leading products manufactured at its own plant are displayed in the executive office, more for reference however, than for sales purposes.

The company maintains its own warehouse and office building on the outskirts of the main business district of St. Louis. The one-story building, measuring about 100x100 feet, has been occupied for the past 12 years. Offices are in the front on the street side, warehouse in the back with truck loading platform in the rear adjacent to the company's own private parking lot.

Deliveries are made by char-

tered trucks. This leased service has been found to be more economical in the long run than owning and operating its own truck fleet. Out-of-town deliveries are made mostly by motor freight.

Navy Brand Products traces its beginnings back to the foresight and energy of Louis Richter, who although not active in the business now, still heads it as president. Associated with him are his brother, Alfred Richter, as treasurer; Harry Ackerman as secretary; and Mr. Herzfeld as vice-president.

Alfred readily recalls the early days when he sold mop handles from door to door immediately following his graduation from high school. Some of his customers suggested that they dispose of janitor supplies, so the Richter brothers with borrowed capital of \$2,000 went into business, operating from a small store.

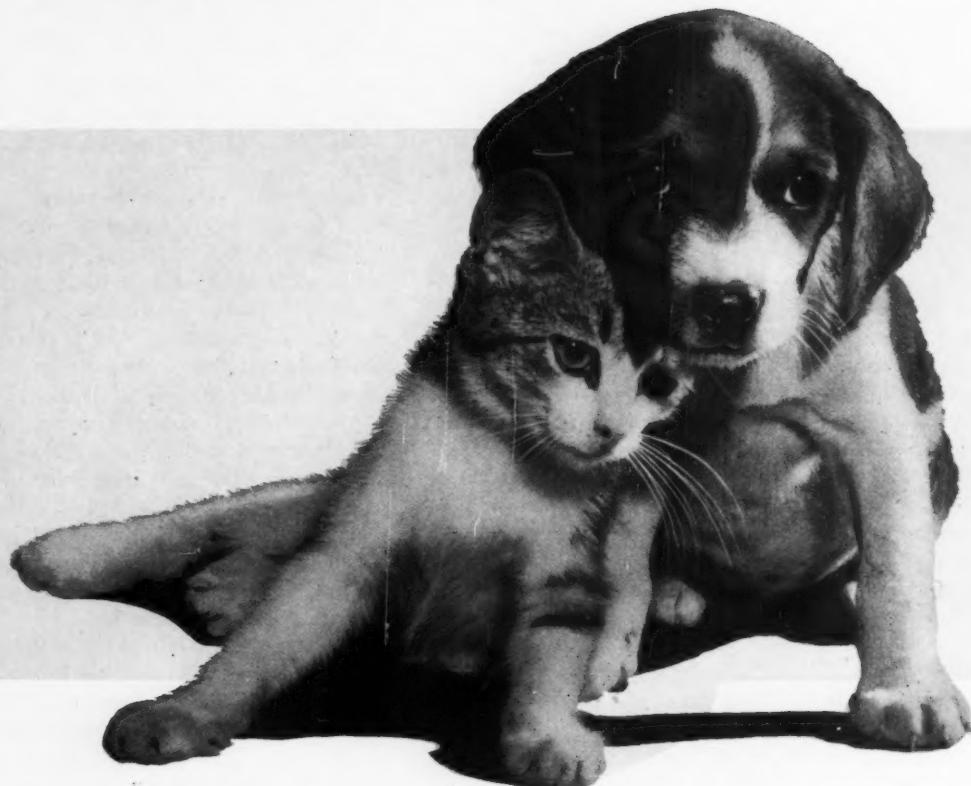
"In those days they used laundry soap in bars for cleaning buildings," Alfred recalls, "and we used to deliver the stuff by horse and wagon, or a boy would take it around by street car. But that first year we were able to issue a 30 percent dividend to the stockholders. Along about 1916 the trend went from bar soap to soap powders, and we would call on 'head janitors' for orders, handling brooms and mops as well."

Depression Selling

BUT the Richters were always careful to emphasize quality rather than price and this principle they considered the basis for their spreading reputation and repeat business. The firm had its tough periods, too, as did others during the depression when it was necessary to resort to package deals with heavy volume and low profit in order to keep going. For example, a fast turn-over then was a combination of 300-lb. barrel of sweeping compound with a 16-inch all-hair pushbroom thrown in for the price of \$5.50.

In those depression days there was a strong demand for
(Turn to Page 165)

**Compatibility is not a problem
when you
specify GIVAUDAN**



Out of long experience in fragrance materials and in adapting them to a wide variety of products of varied uses and methods of application, Givaudan has successfully solved many problems regarding the compatibility of the essential ingredients.

Should you experience a difficulty stemming from incompatibility of materials, we may be able to offer a ready solution. Our staff of chemists and perfumers will welcome the opportunity of working with you in finding the best answer to this sometimes troublesome problem. Your inquiry will receive our prompt, considered attention.



GIVAUDAN

Better perfume materials through constant research and creative ability

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Determination of Pyrethrin I

By V. A. Beckley* and J. Hopkins**

THE conclusions of the standing sub-committee on methods of analysis, of the Colonial Products Advisory Bureau, resulting from the world wide collaborative analysis of pyrethrum flowers have been, to say the least, startling (1). That "a difference of 0.3 between the determinations as carried out by two laboratories should not be regarded as significant for flowers containing between one and two per cent total pyrethrins" would indicate that, either small variations in technique, such as unavoidably creep in, have marked effects or there are hidden difficulties in the accepted technique. The authors, therefore, decided to review the literature and the usual methods of analysis.

Seil (2) greatly simplified the earlier acid methods, and it would appear that there should be no real difficulties in the use of this method. Several workers, however, observed that, in the steam distillation for the removal of the chrysanthemic acid*** from the mixture of acids, there was a loss (3,4,5,6), which was ascribed to the excess of mineral acid present. Mitchell, Tressadern and Wood, (7) however, showed that this loss was due to a temperature effect in the steam distillation, part of the chrysanthemic acid being converted to a saturated hydroxy acid. If, instead of steam being introduced into the distillation flask, the solution was boiled, and water added at intervals to maintain volume, there is no loss of chrysanthemic acid. That the use of this modification gives results in close concordance with those by the

mercury reduction method has been confirmed by us.

However, these losses observed when the Seil method was used, led to a search for an alternative method. Seil in his original publication recorded that chrysanthemic acid reduced Denigés reagent producing a distinctive gamut of colors commencing with pink, then mauve, purple, blue and finally bluish green, or in very dilute solutions grey. Wilcoxon (4) employed this reaction in developing a new method.

Martin (5) found that the Wilcoxon method gave higher results than the Seil, but that the relation between the titration figures and pyrethrin I was not linear. Holaday (8) came to the conclusion that contamination in the form of unsaturated compounds, formed during saponification, interfered with the titration. He modified the procedure by washing the calomel precipitate with hot acetone, or alcohol, followed by two washes with hot chloroform. The presence of barium sulphate in the aqueous phase caused no trouble. This modification was accepted by the Association of Official Agricultural Chemists as a tentative method (9). Pantsios (6) confirmed the quantitative separation of the two acids by petroleum ether. Recently Mitchell et al (7) have shown that a little dicarboxylic acid is extracted by petroleum ether and has suggested that the petroleum ether extract be shaken with a large excess of tenth normal soda which solution is reacidified and re-extracted. This removes the dicarboxylic acid.

Holaday and Graham (10) using aliquots of acidified solution from which barium sulphate had

been removed, presumably to facilitate the drawing of aliquots, found complete linearity between the limits of 2.9 mg. and 114.2 mg. pyrethrin I; with the largest amounts it was necessary to increase the amount of Denigés reagent.

Graham, reporting on collaborative work, comparing the Seil and mercury reduction methods, came to the conclusion that the latter seemed the more accurate, and recommended it to be accepted as "official." The method was published in detail in the fifth edition of "Methods of Analysis of the A.O.A.C." in 1940. In this it was prescribed that the barium sulphate was to be filtered off on a Buchner funnel, apparently because the precipitate did sometimes give trouble. Results obtained by this method were rather lower than by the Seil. In view of the loss of chrysanthemic acid this discrepancy was unexpected, and led to an investigation by Graham and LaForge (12) in which it was established that the reaction between chrysanthemic acid and Denigés reagent was not stoichiometric, but depended on time and, after reaction for one hour, the equivalent for one ml. M/100 KIO₃ was 5.7 mgs. pyrethrin I and not 4.4 mg. This was substantiated by collaborative work reported on by Graham (13), who recommended that this factor be accepted as "official." This was formally done in 1945 (14). Harper discovered that temperature had an important effect, and reported the matter to Graham in a private communication, and it was recommended that the reduction be done for one hour at a temperature of $25 \pm 2^{\circ}\text{C}$. (15). The equivalence and temperature and time factors were confirmed in a

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**Agricultural Chemist (Pyrethrum), Scott Agricultural Laboratories, Department of Agriculture, (Kenya).

***The nomenclature of Harper (Chem. & Ind. 1949, 636) used throughout.

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collaboration by Bray et al. (16).

There is no doubt that the barium sulphate precipitate does sometimes give a little trouble, but filtration introduces an extra operation and the washes further dilution, which may lead to incomplete extraction. Martin and Brightwell (17) point out that there is danger of loss by absorption of chrysanthemic acid if the precipitate be filtered off. Since it had been proved that the presence of barium ions can in no way affect the extraction, the practice of substituting hydrochloric for sulphuric acid arose. This was studied in our laboratories some time ago, and was found to give results identical with those obtained by extraction in the presence of barium sulphate.

It would appear that this modification of the original method became widely used in England. It is difficult to discover the first publication, but Green and others (18) casually mention acidification with hydrochloric acid which "avoids filtration of the barium sulphate and does not influence the results."

However, both the Seil and Wilcoxon-Holaday methods were in general use and in an attempt to secure uniformity the Imperial Institute arranged for a world wide collaboration to study methods of analysis. The Seil method was modified slightly by the originator, the mercury reduction method was modified in collaboration with Graham, in his capacity as referee on economic poisons to the Association of Official Agricultural Chemists, to include acidification with hydrochloric acid (19).

It must be admitted by all with experience in the analysis of pyrethrum that there is nothing inherently difficult in either the Seil or mercury reduction methods; there are many detailed operations, that at first appear difficult, but soon the operations become instinctive. Therefore, it is difficult to see why there should be such differences as recorded in the report on the collaboration (1).

Since the Imperial Institute modification and the Official A.O.

Table I

Sample	Imperial Institute			A.O.A.C.		
	Py. I.	Py. II.	Total	Py. I.	Py. II.	Total
67/50	0.89	0.66	1.55	0.76	0.71	1.47
73/50	0.81	0.62	1.43	0.69	0.61	1.30

A.C. method differ really only in filtration to remove a precipitate which may absorb some chrysanthemic acid these two methods were studied.

Duplicate analyses were conducted concurrently on two samples of pyrethrum powder by both methods. Undoubtedly the A.O.A.C. method gives results for pyrethrin I appreciably lower than the Imperial Institute modification. The results are given in Table I.

It was observed that on filtration the precipitate, even after repeated washing, was yellow, and the filtrate was much paler than the solution acidified with hydrochloric acid. Also, when the chrysanthemic acid was extracted with dilute aqueous alkali from the petroleum ether extract, the alkaline solution was much paler than when hydrochloric acid was used for acidification. Very evidently, besides material appearing as pyrethrin I, some colored material is also removed on the barium sulphate on filtration.

A solution of the sodium salt of crude chrysanthemic acid was assayed by both methods proceeding from the addition of barium chloride. The modified method gave a recovery of 69.5 mg. acid, and the A.O.A.C. 70.7 mg. Thus, there is no absorption of chrysanthemic acid on the barium sulphate. There are, therefore, two possibilities; some acidic constituent of pyreth-

rum, which is filtered out, is capable of reducing Denigés reagent, and so appears as pyrethrin I, or this acid occludes chrysanthemic acid.

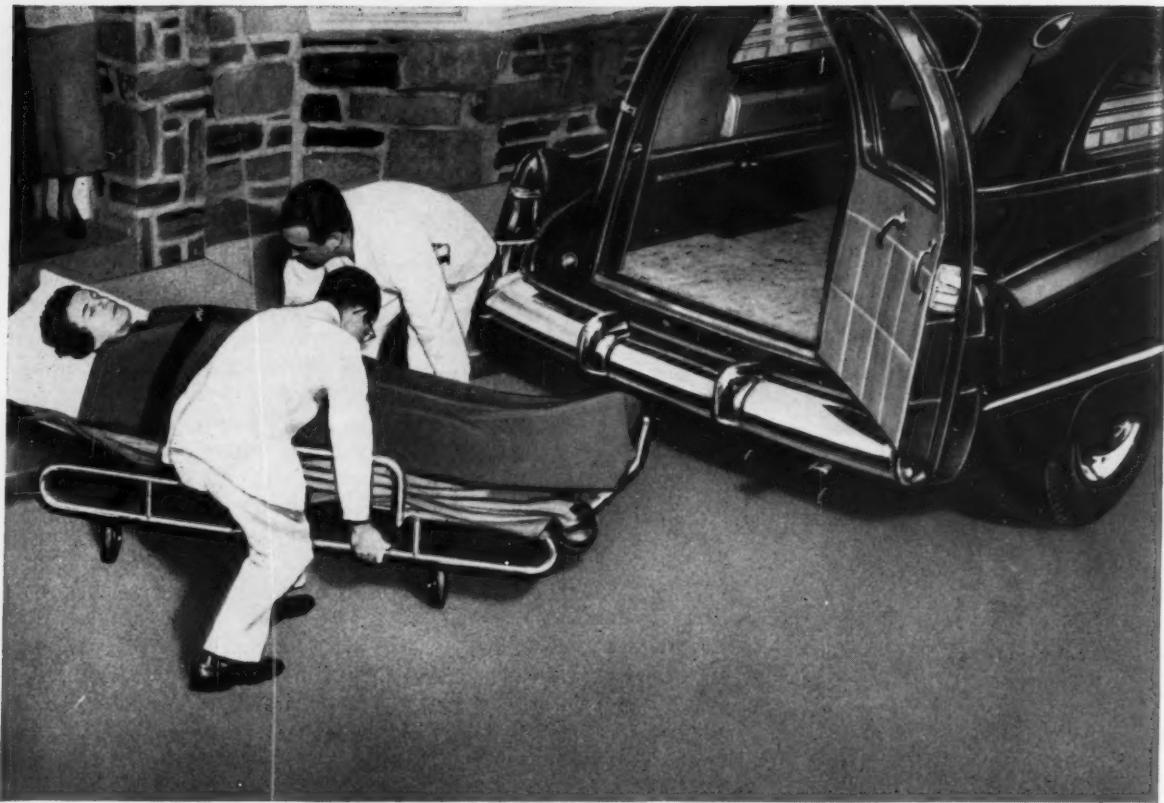
Two more samples were assayed by both methods, in the case of the A.O.A.C. the washed precipitate was transferred into a beaker, excess N/10 NaOH added and the solution filtered, the precipitate was washed several times with alkali. It was observed that this filtrate contained the phenolphthalein used as indicator for the original acidification. This alkaline solution was then assayed for pyrethrin I in the usual way. The final alkaline extract was bright yellow. On addition of Denigés reagent, the color reaction was not observed, but when salt solution was added, a precipitate was formed, which was insoluble in hot alcohol and chloroform and was titratable. The results of this experiment are given in Table II.

It will be observed that the sum of the two sets of figures in the assays involving the filtering off of the barium sulphate approximate the figure for the unfiltered. It would appear that there is some material present in pyrethrum flowers, which is removed by filtration on the barium sulphate precipitate after acidification, and which is capable of reducing Denigés reagent.

Solutions in petroleum ether

Table II
Pyrethrin I.

Sample	Not filtered %	Filtered Filtrate %	Ppt. %
N P 3	1.05	0.90	0.14
K 8	0.93	0.78	0.12



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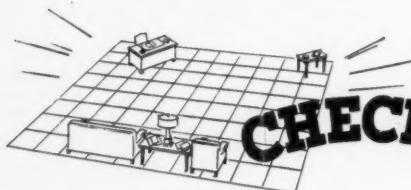
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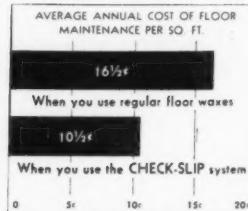
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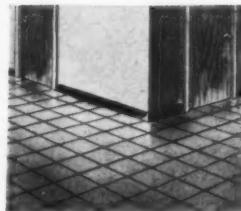
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were prepared containing weighed amounts of a purified pyrethrum concentrate prepared by the method of Barthel, Haller and LaForge (20), and assayed by both methods; the barium precipitates were also assayed as described. A certain amount of polymerization of the pyrethrins had occurred during preparation of the concentrate, as insoluble material separated from the solutions. The results are given in Table III.

It is very evident that the interfering material is extracted from petroleum ether solution by nitromethane, but it would appear that the recovery of it from the filtered precipitate is not so complete.

To investigate the interfering material a quantity of a concentrated pyrethrum extract was evaporated to dryness, saponified with normal alcoholic caustic soda and treated in the usual way for analysis. The barium sulphate precipitate was filtered off on a Buchner funnel and thoroughly washed. It was dark brown in color and the filtrate pale yellow. The precipitate on the filter was treated with excess normal sodium hydroxide and washed with water. A brown solution resulted. The filtrate, too, was rendered alkaline and barium chloride solution added to each and reprecipitation made with sulphuric acid. Each lot was again filtered

The solution from the filtrate fraction, after being made alkaline, was concentrated to a small volume, acidified, and extracted with petroleum ether. Two extractions removed practically all the chrysanthemic acid. This acid was removed from the washed extracts with half normal soda. Since this solution was yellow it was decolorized with activated carbon before the final recovery of the chrysanthemic acid.

The precipitate from the precipitate fraction was treated on the Buchner funnel with half normal soda and thoroughly washed. The alkaline solution was transferred to a separating funnel and acidified with sulphuric acid (1:4) a heavy white cloud developed which soon

Table III		
Recovery of Pyrethrin I.		
Imperial Institute Method	A.O.A.C.	
25 ml. aliquots Solution A.	mg. 61.95	Filtrate mg. 51.25
20 ml. aliquots Solution B.	46.0	Ppt. 3.92

coagulated into a flocculent precipitate. The acid solution was then extracted with petroleum ether, two extractions were required to remove most of the white precipitate, but a yellow spongy mass, later shrinking to a pellicle, separated at the boundary of the two phases.

The petroleum ether extracts were shaken with a small amount of half normal soda solution followed by two washes in water. The solution was faintly colored which color was removed by activated carbon. The acid was recovered by acidification and extraction with petroleum ether. 39.2 mg. were obtained. This gave a titration constant of about 210, and tests indicated that bromine vapor acting on a film of acid gave a dibromide. The absorption spectra of the sodium salt of this acid, and of the chrysanthemic acid recovered simultaneously, were determined. The two spectral curves were simple, that of the chrysanthemic acid beginning to rise sharply at 255 μ , and that of the unknown acid at 250 μ , still rising at 230 μ . It appears that the unknown acid is either related in structure to chrysanthemic acid, or is a mixture containing chrysanthemic acid.

The pellicle referred to above was separated, much being held on the walls of the separating funnel. Treatment of the residue after drying showed that most was soluble in chloroform, and a little was completely insoluble. Thus there are at least three groups of acidic material, besides chrysanthemic acid retained on the precipitate. It is more than likely that the pellicle that separates at the interphase when hydrochloric acid is used for acidification in an-

alysis, consists of these two last groups.

In order to test the two possibilities a kilogram of powder was extracted by cold percolation with petroleum ether and treated as before. The barium sulphate precipitate was treated on the filter with half normal soda, and washed under suction till the runnings were colorless. The alkaline solution would contain the three groups of acids together with perhaps a little chrysanthemic acid which had been occluded. Since two groups are insoluble in petroleum ether, the solution was thrice extracted, after acidification with hydrochloric acid, with petroleum ether. Three washings were given with water. The acids were then extracted with a small excess of half normal soda, and the petroleum ether washed twice with water. The alkaline solution was now acidified with concentrated hydrochloric acid, when a heavy cloud separated, tending to coagulate on standing; this was filtered off under vacuum on a filter paper covered with a thin layer of "Celite"*, in the hope that any chrysanthemic acid would be in the filtrate and the precipitate free from it. The filtrate was a clear pale yellow in color, and the precipitate, a dark yellow oily film. The filtrate and washings were extracted in the usual way and the petroleum ether extracts shaken with five ml. tenth normal soda, and five ml. water. This solution gave the typical color gamut for chrysanthemic acid with Denigés reagent.

The precipitate was again dissolved and reprecipitated and filtered. The Denigés color reaction was given more intensely but the color

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change did not pass beyond the blue stage; presumably there was insufficient reagent, for at the completion of the reaction, there was a crop of crystals colored blue. During the washing of the precipitate, after the third treatment, it was observed that globules of an oily material were floating in the filtrate. Some were isolated and tested with Denigés reagent; a strong positive reaction was given. Evidently under suction at this stage chrysanthemic acid was being drawn out from the occluding acids. In all, eleven precipitations were made before a test of the filtrate gave no reaction with Denigés reagent. A twelfth precipitation was made after which the acids on the filter were dissolved in half normal soda, the solution transferred to a separating funnel, acidified with hydrochloric acid, and the cloudy liquid extracted thrice with petroleum ether. Three extractions did not remove all the cloudy precipitate. Presumably there are at least two groups of acid present in this fraction, one readily extracted by petroleum ether, the other only extractable in the presence of associated chrysanthemic acid.

Since it is now very evident that chrysanthemic acid is held not by the barium sulphate precipitate, but by a group of acids insoluble in water, the question arises of why, in the analysis quoted above (Table II), no color change was observed when the precipitates were assayed in the usual way. With pure chrysanthemic acid the color changes are detectable clearly when the amount of acid corresponds to 10 mg. pyrethrin I; indeed a very faint pink is discernible immediately after the addition of Denigés reagent to an amount of the acid corresponding to one mg. pyrethrin I. If however, there be any other coloring matter present, as there is when these filtered precipitates are assayed, the color changes are masked and may be imperceptible. In the experiments giving rise to the results in Table III, the amounts of acid in the two sets of precipitates correspond to about seven and four mg. pyrethrin I, respectively.

In order to ascertain if the two groups of acid originally soluble in petroleum ether were capable of reducing Denigés reagent and appreciably affecting the final analytical results, 400 gms. of powder were extracted in the cold and the procedure described above followed. After the color reaction could no longer be detected when the filtrates were tested, two more reprecipitations were made to ensure that only traces of chrysanthemic acid could be retained. The filter was allowed to dry at air temperature and then extracted with petroleum ether in a Soxhlet.

From the petroleum ether solution 23.6 mg. of a glassy solid was recovered. A portion 6.4 mg. was dissolved in tenth normal soda, giving a faintly yellow solution. On adding Denigés reagent a cloudiness developed, probably the free acid, but no colors. After an hour the normal procedure was followed, resulting in a titration result of 0.75 ml M/100 KIO_3 , an error of no importance when the usual amount of pyrethrum powder is employed.

The absorption spectrogram of an alcoholic solution of this group indicates it to be a mixture of at least two acids, that present in largest amount having a strong peak at 225 to 222 mu.

The residue in the Soxhlet was dried, extracted with ethyl alcohol and the extract dried. A bulky residue weighing 18 mg. remained. Under 10 x magnification it could be seen there were at least three constituents, one forming well developed crystals, the second very small crystals, and the third a yellow amorphous substance. The whole was dissolved in 10 ml tenth normal soda, treated with Denigés reagent, and the usual procedure followed. This resulted in a titration figure of 0.25 ml M/100 KIO_3 from which must be subtracted a reagent blank of 0.1 ml. Again, any reduction of Denigés reagent by these acids in the course of normal analysis would have no effect on the result.

Several quantitative experiments have been made, one of which will be described. A quantity of

100 gms. fresh pyrethrum powder was extracted with petroleum ether by percolation. The petroleum ether was distilled off and the residue saponified with normal alcoholic caustic soda; the alcoholic solution was washed with water into a two litre beaker, and diluted to about 1,500 ml. The solution was then boiled down to a volume of 500 ml. to remove all alcohol, a little liquid paraffin being used to reduce foaming. "Celite" and barium chloride solution were added, the latter in slight excess. When cool, the solution was filtered through a fluted paper into a 1,000 ml graduated flask, the precipitate washed and finally the solution made up to volume.

Two aliquots of 100 ml. each were drawn for assay by the Imperial Institute method and two for assay by the official A.O.A.C. method. Both precipitates from the latter were retained. The rest of the solution was acidified with sulphuric acid. The precipitate was filtered off on a Buchner funnel as usual. All three precipitates were treated with half normal soda and thoroughly washed. These solutions were combined and thus correspond to 80 gms. powder. The solution was acidified with hydrochloric acid and filtered as usual, and washed till the runnings were colorless. The filtrate was transferred to a graduated flask, and two aliquots of one fifth drawn for assay. The precipitate was redissolved and reprecipitated, all the filtrate being used for assay. This was repeated six times, when the alkaline solution from the last precipitate was assayed as a whole. The results are given in Table IV.

The concordance between the figures for the unfiltered assay and the sum of the filtered assay and the reprecipitations is remarkable, especially if allowance is made for reagent blanks. It is evident that even after six reprecipitations chrysanthemic acid is retained by the co-precipitated acids, although the color changes were paler than one would expect from 14 mg. of the acid. However, in the previous experi-

(Turn to Page 173)

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Aerosol Consumer Survey

AN estimated 130 million aerosol units were sold in 1953, with more than eight of every 10 housewives questioned in a nation-wide survey responding that they had purchased aerosol products and liked their ease of application and effectiveness. These and other facts are contained in the sixth consumer market survey on aerosol products of the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del. The full report of the study, conducted among 2,599 housewives throughout the U.S. last July, was presented at a meeting of the Aerosol Division of the Chemical Specialties Manufacturers Assn., at the 40th annual C.S.M.A. meeting in Washington, last month.

In the last Du Pont consumer survey, that conducted in 1951, only 57 per cent of those polled said they had used an aerosol product. This year the total was 96.9 per cent, an increase which closely parallels the industry's growth from 43 million units of aerosol products in 1951 to an estimated 130 million in 1953.

Once again aerosol insecticides led the list of "best sellers". Although moth balls, flakes, cakes and crystals were mentioned most often as an insecticide used by housewives who participated in the survey, 48 per cent of the entire group reported trying both aerosol and non-pressurized insecticides. Among the latter, the aerosol dispensed product was preferred by a better than six to one margin over the second choice, liquid spray guns.

Of six other types of products available in both aerosol and non-pressurized containers and mentioned specifically in the survey, the most popular item in self-spraying packages was room deodorant. Aerosol shave cream, Christmas snow, personal deodor-

Nearly 130 million aerosol units were sold in 1953, newest Du Pont study shows. Aerosol insecticides again led the list of best sellers

ants, paints and hair lacquer followed in that order.

In practically all cases, housewives rated the effectiveness and ease of application as the biggest factor in persuading them to buy aerosol products.

As to types of retail outlets where housewives preferred to buy aerosol products, the survey showed that food-grocery stores and department stores were the most frequented shopping spots for aerosol products. However, some other types of stores led in individual items. Hardware stores were chosen by 52.2 per cent of the housewives as their shopping place

for aerosol paints, while food and grocery stores were most often named by women buying aerosol insecticides or room deodorants. As might be expected, drug stores were the favorite shopping spot for shave creams, personal deodorants and hair lacquers in aerosol form.

Hair lacquers were used by 37.5 per cent of the 2,599 women polled, but of those, 43.6 per cent had tried aerosol-dispensed hair care products. Among the latter products, aerosol hair lacquers were preferred by nearly 63 per cent of the purchasers, with liquids and creams rated as first choice by 16 and six per cent, respectively.

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At the 40th annual meeting of Chemical Specialties Manufacturers Association, Inc. in Washington, D. C., the exhibit of American Can Co., New York, stressed Canco's line of pressure cans now being mass-produced on standard high-speed manufacturing equipment. Canco's containers have special tops to hold a variety of valves. Inspecting the cans are (l. to r.) R. Hollister, commodity sales manager of Canco's Atlantic division; John A. Weiler of McCormick & Co., Baltimore; Robert J. Peterson of Continental Filling Co., Danville, Ill. and T. K. Webster, commodity sales manager of Canco's Central division.

Although more than 45 different types of products already are packaged in the aerosol containers, members of the consumer panel said they would like to see many more. Their suggestions for new pressure-dispensed products included floor wax, soap, tooth paste, catsup, salad dressing, cake topping, mustard, paint and nail polish remover, bath powder, car cleaner, hair oil, synthetic deter-

gents, starch and mouth wash.

The 1953 consumer survey was conducted by Batten, Barton, Durstine & Osborne, Inc., New York advertising agency, among members of its National Panel of Consumer Opinion. Members of the panel are selected to represent an accurate cross-section of the nation's families by age group, annual income and geographical location.

for five percent of total Brazilian exports. The decline of the carnauba market is a factor in the country's new austerity regime.

Oil Equipment Moves

Oil Equipment Laboratories, Inc., aerosol valve manufacturers, recently moved its offices and plant in Elizabeth, N. J. from Bridge St. to new quarters at 600 Pearl St. The telephone number at the new address is Elizabeth 4-3900.

Genetron Output Tripled

Capacity for the production of "Genetron 11" and "Genetron 12" will be tripled, according to a recent announcement by General Chemical Division of Allied Chemical & Dye Corp., New York, upon

completion in February of the company's new Baton Rouge plant. Output of these propellents for aerosols and other pressure propelled products has already been greatly increased.

New Fly Control Approach

Housefly control was discussed in the light of the recent increase in resistance to DDT and other chemicals by members of the Entomological Society of America when they met in Los Angeles last month. Dr. Ralph B. March, University of California, reported on chlorthion, a compound said to have fast knockdown powers and a long period of control. Several of the papers shed new light upon housefly physiology which may open different avenues of control.

Zonite Buys Lady Esther

Zonite Products Corp., New Brunswick, N. J., has acquired the business of Lady Esther, Ltd., from the Lansing Foundation, it was announced recently by Colby M. Chester, chairman of the board. The firm also announced election to its board of directors of Charles Coolidge, Ropes, Gray, Best, Coolidge & Rugg, Boston; and of William Chisholm, Oxford Paper Co., New York, to fill the vacancies caused by the resignation of former directors Raymond E. Lee and John S. Minary.

Maintenance Show Set

The fifth Plant Maintenance & Engineering Show will be held at the International Amphitheatre in Chicago, January 25 through 28.

DDT Linked to Disease Rise

DDT and its chemical family are accused of increasing the incidence of certain diseases and of causing a group of new syndromes in man and beast by Dr. Morton S. Biskind of Westport, Conn., in a recent issue of the *American Journal of Digestive Diseases*. Among ailments listed for man are hepatitis, disorders of the heart and arteries, and certain neuropsychiatric symptoms.

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Ever see a covey of bugs fly unscathed through a cloud of insecticide like they had radar? Or see them shake off a direct hit and amble away unharmed and unconcerned? That's the time to start specifying GEIGY METHOXYCHLOR, the chemicals that are positively deadly to pests but relatively safe to human beings and animals. GEIGY METHOXYCHLOR products are effective for fly control, storage pests and for fruit, vegetable and forage crops. They are available as the following:

GEIGY METHOXYCHLOR "25"
(25% emulsifiable solution—
2 lbs. methoxychlor per gal.)

GEIGY METHOXYCHLOR "90"
(90% methoxychlor)

GEIGY METHOXYCHLOR "20"
(20% methoxychlor solution)

GEIGY METHOXYCHLOR "50"
(50% methoxychlor wettable powder)

GEIGY 5% METHOXYCHLOR DUST

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CSMA Meets

(From Page 132)

The final feature of the meeting was a report of the CSMA Committee on Emulsion Stability. The paper, delivered by H. R. Suter of Wyandotte Chemicals Corp., Wyandotte, Mich., and prepared jointly by Mr. Suter, H. L. Sanders of Ninol Laboratories, Inc., Chicago, and E. S. Garverich of Pennsylvania Salt Manufacturing Co., Philadelphia, dealt with a "Hydrometer Test for Emulsion Stability." The test is based on the changes in density as indicated by a sensitive hydrometer floating in an emulsion.

The customer's reaction to and opinion of aerosol products was the subject of the opening discussion of the Aerosol Division meeting on the afternoon of Dec. 7. The study, supported by the Kinetics Chemicals Division of E. I. Du Pont de Nemours & Co., Wilmington, Del., is reviewed in detail on page 149 of this issue.

Glass aerosols, now ready for consumer use, were discussed by the next speaker, Scott H. Adams of the Wheaton Companies, Mays Landing, N. J. He pointed out that cosmetic and pharmaceutical companies are filling and presenting this package to the public. Rigid drop tests have been completed, by Wheaton plastic company's research department and by two large insurance companies, according to Mr. Adams, with the result that glass aerosol products are now acceptable for insurance coverage at a modest premium. Glass being an inert material, it can now be employed to package aerosol products that it has not been possible to package as aerosols heretofore.

One of the major factors that has contributed to the rapid growth of the aerosol industry is the continued trend toward the utilization of lower pressures, Francis A. Mina, pointed out in his paper "Dispensing Products by Internally Produced Ultra-Low Pressure." Mr. Mina is with Zonite Products



Looking back . . .

Karl Dolge of C. B. Dolge Co., Westport, Conn., recalls some of the early days of the association, as M. M. Marcuse, chairman of West Disinfecting Co., Long Island City, N. Y. looks on.

Corp., New Brunswick, N. J. Lower pressures, according to Mr. Mina, have made it possible to use lighter weight containers, such as tinned or lacquered black plate and ex-

Second photo: Founders' roles are reversed.

Bottom: Messrs. Marcuse and Dolge hold combination clock barometer desk sets presented to them by Mr. Weirich on behalf of the C.S.M.A.

truded aluminum cans. Even at room temperature, the so-called low-pressure aerosols produce pressures of 25/40 psig. At such pressures, it is impractical to package in frangi-

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(Spiral Wound)

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Quality, Durability and Customer Satisfaction

Moran originated and pioneered tank glass washing brushes, so it is easy to see why no other product duplicates Moran quality and durability. Single, twin and triple glass models are available—all with rust proof base. Various combinations of bristles make it easy for you to meet the requirements of

every customer. Repeat sales are assured since the customer can order refills for the base when brushes wear out. For further details on the profit making opportunities with the Moran Glass Washing Brush line, write or wire today.

There is a quality Moran brush for every maintenance need.

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Specifically prepared for use on asphalt tile, rubber tile and composition floors. Recommended wherever solvent type floor

wax cannot be used. Prevents bleeding of colors, pitting, and softening of rubber composition and asphalt tile.

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- Bears Underwriters' Laboratories seal of approval as an anti-slip floor treatment material.
- Saves work — cleans, polishes and protects floor in one operation.
- Spreads evenly and smoothly.
- Lasts longer — does not easily mar, crack or scratch.
- Economical to use — approximately one tablespoonful will wax three square yards.
- Made with the finest available waxes, under strict laboratory control.

Packed in 20 oz. cans — 5 lb cans — 35 lb. pails

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ble containers such as uncoated glass.

In addition to the "three phase system" for aqueous type preparations, a method has been devised whereby alcohol-based products can now be sprayed to a fine degree of atomization by the use of internally produced pressures as low as 11 to 15 psig at room temperature. The term "ultra-low pressure" system is suggested to describe this new development.

This new substantially lower pressure system is based on a critical relationship between alcohol concentration and amount of propellant of limited solubility. In certain carefully controlled proportions of these ingredients, sprays are produced with varying degrees of atomization which may be modified by suitable changes in valves.

Conclusions: These low pressures make it possible to package in glass or other frangible containers alcohol base products, such as eau-de-colognes, perfumes, deodorants and other toiletries and medical items, which heretofore, due to corrosion or other factors, could not be successfully pressure-packed in other types of containers.

Reduction of container corrosion in pressure-packed detergent shampoos to the point where their use appears commercially feasible was reported in a paper by Wiley J. Pickett of Stepan Chemical Co., Chicago. By modifying the formula for its brand of triethanolamine lauryl sulfate, which contains a special corrosion inhibitor, corrosion activity is markedly reduced. Tests at both room temperature and the higher temperatures of accelerated testing procedures demonstrate that the selected inhibitor definitely reduces corrosion action of the detergent.

1954 will be a quiet year from the standpoint of legislation, W. S. Jessop, of U. S. Sanitary Specialties Co., Chicago, and chairman of the legislative committee of C.S.M.A. told the general session, held the morning of Dec. 8. He called on greater participation in legislative matters by members and

Weirich Portrait

Upon completion of his second term as president of the Chemical Specialties Manufacturers Association at the 40th annual meeting at Washington last December 7, Clarence L. Weirich was presented with a portrait of himself by Michael Lemmermeyer, painter, artist and president of Arcmatic Products, Inc., New York. This "late Lemmermeyer" had been intended for presentation to Mrs. Weirich who was unable to attend the C.S.M.A. meeting. The presentation was made by newly-elected president, Melvin Fuld, president of Fuld Brothers, Inc., Baltimore. The painting was made by Mr. Lemmermeyer from the front cover of "Soap and Sanitary Chemicals" for January, 1952, when Mr. Weirich was first elected president of



CSMA. Mr. Weirich is vice-president of the C. E. Dolge Co., Westport, Conn.

their local branch representatives.

Last year was an active year for legislatures. Five bills were pending in Congress affecting chemical specialties. Hearings were scheduled before appropriate committees and then postponed, except in one case, H.R. 4277 on pesticidal residues, which probably will be enacted at that next session. This bill is of little concern to the Chemical Specialties Manufacturers Assn., Mr. Jessop stated. Of the 44 state legislatures convening in 1953 all have now adjourned. Twenty-three states considered legislative matters concerning chemical specialties. Of five new economic poisons bills, three were amended to the satisfaction of the association, one died and one is unsatisfactory. Of those calling for an increase in registration fees one is satisfactory, three are unsatisfactory and two died. Two economic poisons amendments were satisfactory.

Other reports of officials of the association presented at the general session were those of president C. L. Weirich, H. W. Hamilton, secretary and Peter C. Reilly, treasurer.

The growth of regulatory legislation in the United States, beginning with the Interstate Commerce Act of 1887 was reviewed by John D. Conner, Washington, D. C. counsel of C.S.M.A. He pointed out that "The mushrooming of legislative and regulatory problems of this industry since the founding of the association in 1913 has amply justified the determination of that group to attempt to meet and solve those problems on a cooperative basis. The role of the Federal Trade Commission as a regulatory agency was outlined by Mr. Conner, whose address bore the title, "The Federal Trade Commission and the Chemical Specialties Manufacturer."

Although past proceedings of the F.T.C. involving chemical specialties reveal that some of the products of the industry have been offered to the public under unfair and misrepresentative claims, and thus react against all products of the industry, the policy of the Commission is "pock-marked with a myopic concern for trivialities and a preoccupation with the minutiae of our

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business life," Mr. Conner asserted.

As to controls yet to come, Mr. Conner pointed out that we are faced with the prospect of extensive additional state legislation.

The final speaker of the general session was Clifton E. Mack of the Federal Supply Service, General Services Administration, Washington, D. C., who discussed "Federal Purchasing." The most important single change in federal purchasing since the beginning of our Federal government was the enactment of the Federal Property

and Administrative Services Act, Mr. Mack stated. This law established a legislative charter for a system of supply in the Federal government. The Act created the General Services Administration as the central supply authority for the Federal government. In effect, it has changed the philosophy of public buying in the Federal service. Traditionally the philosophy rested upon the principles of competition and accountability. The new legislation emphasizes in addition, supply and property management.★★

Cosmetic Chemists Honor Klarmann

DR. Emil G. Klarmann, vice-president in charge of technical services, Lehn & Fink Products Corp., New York, received the 1953 medal award of the Society of Cosmetic Chemists at the sixth

medal award dinner, held December 10 at the Hotel Biltmore, New York. The presentation was made by Paul G. I. Lauffer, George W. Luft Co., Long Island City, N. Y., retiring president, and Everett G.

Officers of the Cosmetic Chemists Society shown in top photo are left to right: Dr. Paul G. I. Lauffer, George W. Luft Co., retiring president; Dr. Donald H. Powers, Warner-Hudnut Co., incoming president; Dr. Kenneth L. Russell, Colgate-Palmolive Co., president-elect, and Edward Sagarin, Standard Aromatics, program chairman.

Contributors to the technical program include, Alex Post, E. M. Burdick, Hazel Bishop, Lester I. Conrad, Norman H. Ishler, H. L. Sanders, G. J. Sperandio, H. A. Shelanski.



McDonough of Evans Chemetics, Inc., New York, who acted as toastmaster. The dinner was preceded by the Society's ninth annual technical meeting, at which eight papers were read.

"Polyvinylpyrrolidone: a Useful Adjunct in Cosmetics" was the title of a paper by H. A. Shelanski and M. V. Shelanski, Industrial Toxicology Laboratories, Philadelphia. This compound, to date chiefly known as a plasma extender, can serve as a thickening and grooming agent in shampoos. Its capacity to detoxify several commonly used ingredients of cosmetics has been shown in various tests. The great substantivity to skin and hair exhibited by PVP can be imparted to other components of formulations where this property is desirable. PVP is a solubilizing agent and reduces irritating properties of certain cosmetics materials, while itself exhibiting extremely low toxicity. The compound is capable of improving the antibacterial activity of various disinfectants.

Thickening action, foam stabilization, clarifying power, and low eye irritation are the properties which make alkylolamides important components of shampoo formulations, according to a paper by H. L. Sanders, E. A. Knaggs, and O. E. Liman, Ninol Laboratories, Inc., Chicago. Certain types of these nonionic surface active complex amides exhibit pearlescent and opacifying effects in liquid cream shampoos. Alkylolamides in lauryl sulfate and alkyl aryl sulfonate solutions were shown to increase volume and speed of foam formation even in the presence of oil. A novel foam testing apparatus was described with which the effect of these materials on foaming properties can be measured quantitatively. The tests were performed on small buns of human hair. Data showing viscosity curves of alkylolamides in both lauryl sulfate and alkyl aryl sulfonate were presented.

A clue to the understanding of lanolin chemistry lies in the presence in that substance of consider-
(Turn to Page 171)

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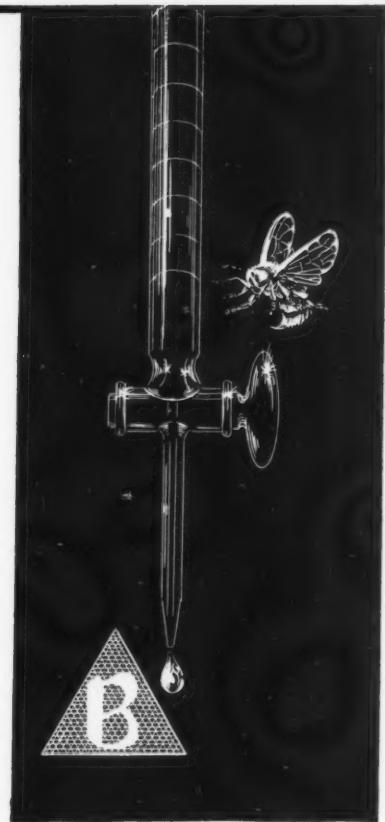
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News

Rose Forms Own Firm

Gene Rose, for many years connected with G. Barr & Co., Chicago aerosol loader, recently an-



GENE ROSE

nounced the formation of his own company, Gene Rose Co. The new firm is an affiliate of Scientific Oil Compounding Co., with headquarters at 1637 Kilbourn Ave., Chicago 23, Ill. Gene Rose Co., according to Mr. Rose, who is president, is specializing in quality production of pressurized dispensers. In addition the firm offers confidential product development work, as well as complete packaging services.

Insecticide Price Cut

Rohm & Haas Co., Philadelphia, announced recently it had reduced the price of its "Rhothane D-3" insecticide five cents a pound. The agricultural insecticide now sells for 45 cents a pound in carload and truck load lots, f.o.b. plant, Philadelphia.

Hollingshead Pays 25 Cents

A quarterly dividend of 25 cents a share on its common stock, payable Jan. 15, 1954 to stockholders of record Dec. 31, 1953, was announced late last month by R. M. Hollingshead Corp., Camden, N. J. Similar amounts were paid in October and June, while a quar-

terly dividend of 20 cents was paid in March and January, 1953. Hollingshead offered its common shares publicly for the first time in September through an investment banking group headed by Drexel & Co.

Connolly Johnson V.P.

The appointment of William N. Connolly, public relations director for S. C. Johnson & Son, Inc., Racine, Wis., as a vice-president and the naming of Willard G. Aschbrenner, a Racine banker, as a director of Johnson, were announced recently following a meeting of the company's stockholders.

Mr. Connolly has been with S. C. Johnson & Son, Inc., for 27 years. For 22 years he was advertising manager. Five years ago he was named director of public relations. He is a native of Pittsfield, Mass., and attended Colgate, Princeton and Columbia Universities. He is a former member and chairman of the American Association of Advertising Agencies and a member of the board of the Audit Bureau of Circulation.

Acquires "Easy Off"

The acquisition of "Easy Off" oven cleaner from the stockholders of Wolcott Co., Hartford, Conn., was announced late last month by Strieder Schraffenberger, president of Boyle-Midway, Inc. In addition to "Easy Off", Boyle-Midway markets such other household chemical specialties as "Aerowax", "Wizard Deodorizers", "Black Flag Insecticides", "3-In-One Oil", and "Plastic Wood".

Sales of "Easy-Off", are being handled by the regular Boyle-Midway sales organization, and plans are being formulated for increased sales volume through more advertising and merchandising, according to Mr. Schraffenberger. All shipments since Jan. 1 have been made from Boyle-Midway plants and warehouses located at Cran-

ford, N. J.; Chamblee, Ga.; Chicago, Los Angeles, Dallas and Seattle.

Geigy Forms New Div.

The formation of Geigy Agricultural Chemicals as a separate division of Geigy Chemical Corp.,



DR. G. R. FERGUSON

New York, to handle production and sales of insecticides, fungicides, herbicides, defoliants and fertilizer supplements, was announced last month.

The new division is headed by Dr. George R. Ferguson, formerly technical director in charge of research and production, as president. John G. Plowden, formerly assistant sales manager and for the last two years manager of the western territory in Fresno, Calif., has been named sales manager to replace R. J. Zipse, who resigned recently to join Mathieson Chemical Corp., Baltimore. L. G. Gemmell continues as assistant sales manager and Paul B. Allen has been named manager of the western territory succeeding Mr. Plowden.

C. C. Alexander, formerly chief entomologist, has been named research manager in charge of research and development at the research laboratory in Bayonne, N. J.

Lewis P. Harris, formerly technical director of the Agricultural Chemicals Division of Sherwin-Williams Co., Cleveland, and since 1950 manager and plant superintendent of Cotton States Chemical Co., Monroe, La., joins Geigy as



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is my business**

Too many salesmen have been going around, in recent years, calling themselves by fancy names; and it must be recorded as a matter of industrial history that the maintenance-chemical field was in the path of the plague and did not escape getting a touch of it.

Here is a top-drawer selling organization—whose only business is SELLING—the word "Expert" is down the drain, but twenty-three years as the Director-of-Sales for some of the country's foremost producers of chemical specialties is a factor to be reckoned with—*flexible, facile*.

Organization wise—I am available for short-term assignments, working closely with your SALES and ADVERTISING Departments—on a per-diem basis or a flat monetary retainer, for the long pull.

I can most likely do that SELLING job that keeps you smoking yourself into a headache.

Interested? Of course you are!

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MANAGEMENT likes the safe, sanitary, efficient, trouble-free Mione features, plus its economy per pound, low cost per scrub-up, and the basic economy of skilled hands always at top productivity.

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MIONE SPECIAL Containing G-11* (Hexachlorophene) is a GREAT new soap with GREAT profit possibilities
Full details on request
*Trade mark of Sindar Corporation

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Makers of famous hand soaps for 40 years
COLLINGDALE PENNSYLVANIA

production manager of the Agricultural Chemicals Division. He is making his headquarters at Geigy's research laboratory in Bayonne, N. J. Mr. Harris supervises the formulation and control laboratories as well as production operations of Geigy's nine processing plants.

— ★ — **Finds Chlordane Harmless**

Chlordane is practically harmless to man, the American Medical Association, Chicago, announced recently. The AMA bases its pronouncement on a study of the insecticide made by Dr. Walter C. Alvarez, retired Mayo Clinic physician and scientist, and Dr. Samuel Hyman of Chicago. The two doctors examined 24 men who had worked in a plant which manufactured chlordane. They found that no harmful effects could be detected in the men, who had been exposed to the insecticide day after day for months and years.

The doctors, who knew that when chlordane was injected into a living animal it resulted in damage to the liver, kidneys, lungs, brain, nerves and intestines, did not inject any chlordane into any human being.

— ★ — **PCO Conferences Set**

Regional conferences scheduled for the National Pest Control Association include the annual meeting at Purdue University, Jan. 25-29; a southern regional conference to be held at Louisiana State University, Baton Rouge, Feb. 1-3, and the annual eastern regional conference to be held at the University of Massachusetts, Amherst, Feb. 4-6.

— ★ — **Brunton Leaves Diamond**

J. G. Brunton, vice-president in charge of sales of the organic chemicals division of Diamond Alkali Co., Newark, N. J., resigned recently. His future plans have not been announced as yet.

Mr. Brunton joined Kolker Chemical Works, Inc., Newark, N. J., in 1949 as vice-president in charge of sales, a post in which he continued after Kolker's acquisition by Diamond Alkali Co., Paines-



New "D-men," field service representatives of Diversey Corp., Chicago, who recently completed an intensive technical and sales training course and have been assigned to sell cleaners, disinfectants, insecticides, floor waxes and polishes to institutional and industrial establishments.

Back row (l. to r.) R. C. Jones (Cleveland Division); H. P. Bismark (Central Division); Carlton Plumb (Pa-

cific Division); W. C. Culver (Pacific Division); W. E. Marshall (Pacific Division); K. A. Fisher, District Mgr. (Central Division); E. L. McKee (Southern Division).

Front row (l. to r.) Quintin Clark (North Central Division); T. J. Baggott (Central Division); S. G. Smith, Manager of the Maintenance Products Dept.; R. R. Seelye (Chicago).

ville, O., in 1951. Earlier he had been with Pennsylvania Salt Manufacturing Co., Philadelphia, for 10 years during part of which time he had served as sales manager of agricultural chemicals.

— ★ — **Thom Leaves Westvaco**

J. C. Thom resigned recently as sales manager of Westvaco Chemical Division, Food Machinery & Chemical Corp., New York, effective Dec. 31. Mr. Thom, who had been with Westvaco since 1941, and sales manager since 1943, joins Fram Corp., filter manufacturers of Providence, R. I., as a vice-president.

Donald C. Oskin, assistant sales manager of the division, has been named to succeed Mr. Thom. In his new post he will act as sales manager for both Westvaco Mineral Products Division and Westvaco Chlor-Alkali Division, two new Food Machinery & Chemical Corp. divisions, which on Jan. 1 replaced Westvaco Chemical Division. Assistant sales manager since May, 1952, Mr. Oskin was previously director of district sales for Westvaco and before that served for a time

as head of FMC's Washington, D. C., office.

— ★ — **New Waste Receptacle**

A new round top receptacle, constructed of one piece welded, heavy-gauge furniture steel, was announced recently by United Metal Box Co., New York. The receptacle is available in a variety of colors with a chrome dome or in all chrome. All models have a chrome self-closing door.

— ★ — **BHC Price Increases**

Price increases in the technical grades of benzene hexachloride were announced recently by Columbia-Southern Chemical Corp., Pittsburgh, and Niagara Chemical Division, Food Machinery and Chemical Corp., Middleport, N. Y. The latter firm has increased the carload and truck load prices of technical grade BHC, 14 percent gamma, to 0.9 cents per gamma delivered. Less-carload shipments take the carload price plus one cent per pound.

Columbia-Southern's new prices for technical grades of benzene hexachloride are: 15 percent

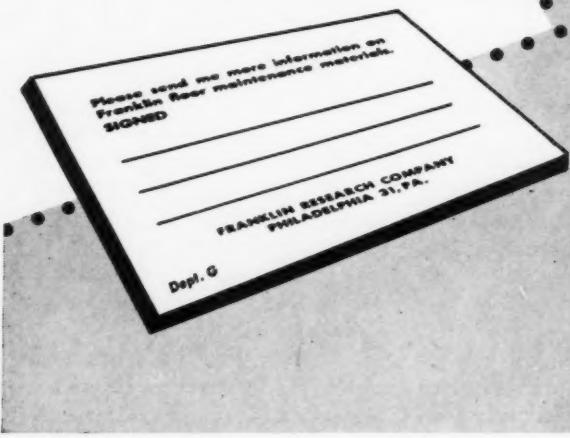
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FRANKLIN'S WAX . . . a tough, long wearing, self-polishing wax. Cuts maintenance costs on linoleum, rubber, asphalt tile, wood, etc. Withstands water and damp mopping indefinitely. Classified by Underwriters' Laboratories as anti-slip.

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Dimethyl Benzyl Lauryl Ammonium Chloride.

Germ-i-tol concentrate 50% is an antiseptic of high germicidal, fungicidal and bacteriostatic potency. A specially processed grade meeting the specifications of benzalkonium chloride is also available.



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Laurel Dimethyl Dichlorobenzyl Ammonium Chloride.

Used in 80% strength as fluxing agent. Also used as a high phenol coefficient disinfectant.



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gamma, 0.9 cents per gamma unit, delivered and 36 percent gamma, one cent per gamma unit, delivered.

J. C. Vernon, president of Niagara Chemical Division said, in announcing the increases, that they "have been made to bring prices more nearly into line with increased raw material and distribution costs and to permit us to continue our comprehensive service to consumers."

Similarly, Columbia - Southern pointed out that as a result of increasing prices, the company could resume needed technical services to customers. These services had been curtailed due to extremely low prices prevailing last season.

Wear-Proof Mat is 50

Wear-Proof Mat Co., Chicago, is celebrating its 50th anniversary, it was announced recently.

Hercules Changes

Establishment of a new rosin amine sales and development group under the management of Emile Pragoff, Jr., was announced recently by Hercules Powder Co., Wilmington, Del. Two new assignments for technical salesmen were announced at the same time: Charles Moss has been transferred from the Wilmington technical service group to the New York territory as a technical sales representative. Fred Donovan has been shifted from technical sales work in New York territory to a similar position in the San Francisco territory.

The firm also announced the appointment of Richard J. Both as sales manager, agricultural chemicals, Naval Stores Department, to succeed the late Frank U. Rapp. Mr. Both joined Hercules in July 1940 and became assistant sales manager of the agricultural chemicals section in 1952.

James W. Maxwell, a member of the company's toxaphene sales group, has been transferred from the Chicago to the Atlanta district. Mr. Maxwell, who is an entomologist, has been with Hercules since the summer of 1952.

Vulcan Names Mitchell

The appointment of Ray I. Mitchell as sales-service representative for Vulcan Steel Container Co.,



RAY I. MITCHELL

Birmingham, Ala., was announced recently by Gordon D. Zuck, president. Mr. Mitchell, who is a graduate of the University of Alabama and served with the Navy during World War II, has been doing special sales work since. He is making his headquarters at the company's main office in Birmingham. He continues to contact users of steel pails and drums throughout the south as a special representative.

Pariseau to Turco

The appointment of Paul R. Pariseau, formerly Los Angeles general sales manager of Wyandotte Chemicals Corp., Wyandotte, Mich., as assistant to S. G. Thornbury, president of Turco Products, Inc., Los Angeles, was announced re-

PAUL R. PARISEAU



cently. Mr. Pariseau, in his capacity as assistant to the president on special assignments, initially will deal with production matters. A native of Michigan, Mr. Pariseau has been associated with the chemical industry for 25 years. Following his graduation as chemical engineer, he became chief chemist of W. T. Rawleigh Co. of Canada. He held this post until 1937 when he moved to Los Angeles, to become production manager of Pacific Chemical Co. He later became vice-president and general manager. When Pacific Chemical was acquired by Wyandotte in 1950, Mr. Pariseau remained with Wyandotte as Los Angeles general sales manager.

McCormick Buys Ben Hur

The merger of McCormick & Co., Inc., Baltimore, and Ben-Hur Products, Inc., Los Angeles, was approved recently by the Corporation Commission of California. Operations of Ben-Hur will be carried on as a division of McCormick, which now operates two West Coast divisions. McCormick purchased A. Schilling & Co., San Francisco, in 1947.

PEA Holds Annual Dinner

A cash award to the "William O. Buettner Memorial Fund" to honor the late executive secretary of the National Pest Control Assn., was made at the annual dinner of the Professional Exterminators Association held recently at Fraunces Tavern, New York. Jacques Hess, Exterminating Services Corp., New York, regional vice-president of the National Pest Control Assn., who accepted the award on behalf of N.P.C.A. thanked PEA and expressed the hope that the donation would serve as an example for similar action by other associations.

Philip W. Friedman of Sanex Exterminating Co., Brooklyn, acted as toastmaster at the affair which was attended by 120 members, friends, and guests, which included A. E. Ritt of Vogel-Ritt, Inc., Philadelphia, president of the N.P.C.A.; Mrs. William O. Buett-

!!!ATTENTION!!!
ALL DETERGENT BUYERS—
OFFERING OF SURPLUS LOT

60 lb. Bags 5c per lb.
 90 lb. Drums 6c per lb.
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SYNTHETIC DETERGENT
(Sulfonate Coco Mono Glyceride)

We are offering for immediate sale a synthetic detergent originally manufactured by a leading soap company. This material has been recently discontinued and as a result we have been able to purchase the entire lot.

This detergent is in dense bead form manufactured from Coconut Oil and Glycerine, with an activity of approximately 35%. In use now with a hundred concerns from converters to bubble bath packers.

Valuable for the following uses:

→ Car Wash	→ Bubble Bath
→ Carpet Cleaning	→ Insecticidal Compounding
→ Scouring Cleansers	→ Laundry Compounding
→ Animal Soap Wash	→ Mechanics Hand Cleaners
→ Dishwashing Compounding	→ Wool Scouring
→ Hand Cleansers	→ General Purpose Cleaners

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WAXES
 Non-Rubbing • Powdered Dance
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ELECTRIC DEODORIZERS
 Select Aire

MANUFACTURING EXCLUSIVELY FOR THE JOBBER



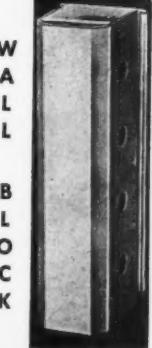
CHLOROPHYLL BLOKS

DEODORANTS

Urinal Cakes
 Deodorant Blocks
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LIQUID SOAPS

Hand-Floor
 Shampoos
 Neutral Cleaners



WALL BLOCK

INSECTICIDES

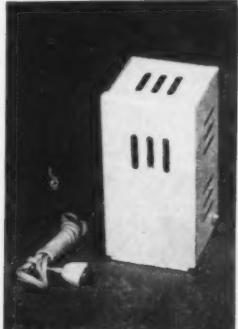
Fly Sprays
 Chlordane Sprays
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 Moth Preventives
 Aerosols

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Metal-Furniture
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DISINFECTANTS
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UNCLE SAM CHEMICAL CO., Inc.

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SOAP and SANITARY CHEMICALS

ner, widow of the late N.P.C.A. executive secretary and her son, William O. Buettner, Jr.; Clinton Garvin, New York City Department of Health; Bernard Weening, president of the N. J. Pest Control Association; Ernest Mills, Fish and Wildlife Service; John Schmitt, Rutgers University; John Medoff, Hudson Exterminating Co., W. New York, N. J., former regional vice-president; Thomas Mahon, N.P.C.A. office.

— ★ —

New Specialties Firm

The formation of South-eastern Chemical Corp. at Douglas, Ga., to manufacture and distribute insecticides, disinfectants, stock sprays and other household chemical specialties was announced recently. Co-owners of the business, which is located on South Peterson Ave. in Douglas, are J. C. Thomas and Dr. George Shirley.

— ★ —

New Florasynth Home

Florasynth Laboratories Inc., New York, recently announced completion of the new building housing the firm's executive offices and eastern production facilities on Van Nest Ave., Bronx.

Appointment of Mel Peck as Texas-Oklahoma representative was announced at the same time by William Lakritz, president. Mr. Peck's previous experience includes service as chief chemist, production control manager and special representative in various branches of the food industry.

MEL PECK



Philip W. Friedman of Sanex Exterminating Co., Brooklyn, and secretary of the Professional Exterminators Assn., presents to Jacques Hess, Exterminating Services Corp., New York, and regional vice-president of National Pest Control Assn., a cash award to the "William O. Buettner Memorial Fund" during recent annual meeting of PEA at Fraunces Tavern, New York.

H. E. "Bert" Moorhead has been named manager of Florasynth Laboratories (Canada) Ltd.

— ★ —

New Shell Ammonia Plant

A new plant for the production of anhydrous ammonia at Ventura, Calif., went on stream recently during a dedication ceremony presided over by R. C. McCurdy, president of Shell Chemical Corp., New York. The cost of the plant has been put at about \$10,000,000. The plant has a productive capacity of 150 tons a day. Together with Shell Chemical's ammonia plant at Pittsburgh, Calif., it maintains the

company's position as the largest producer of anhydrous ammonia sulphate west of the Rockies.

The plant is situated on a 27 acre site three miles north of downtown Ventura. Frank D. Kuenzly, formerly superintendent of the Pittsburgh plant, is manager of the new plant, which employs about 140 persons.

Jobber Mailings

(From Page 139)

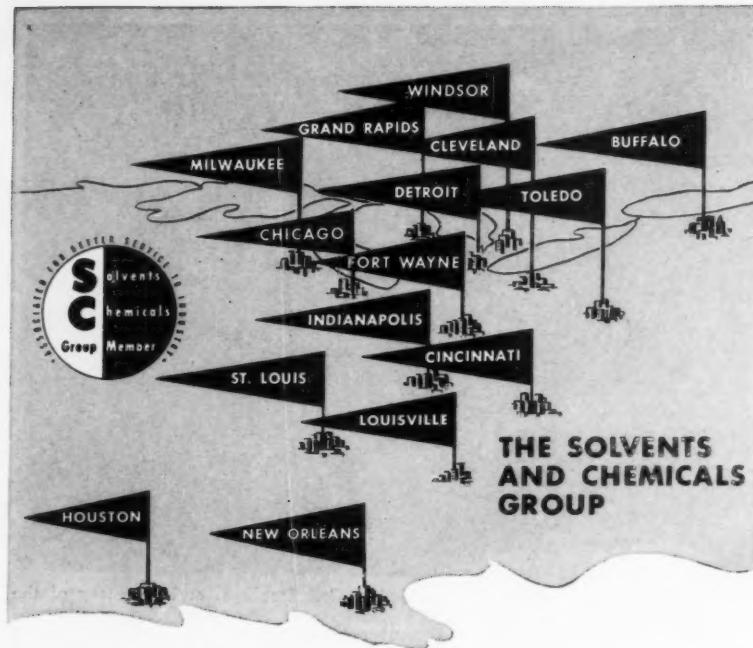
17x23 chamois and 10x12 Rock Island sheep wool sponges, both for 98 cents, which found a ready market among garages and stores. They were sold over the telephone and delivered without charge. Now the minimum order for delivery is \$10.

Another feature of the early days, Alfred recalls, was that all floor brushes were hand-made of split block with drawn wire. The top block was bolted to the bottom. Despite their imperfections, however, they found quick sale.

The firm is still doing business with suppliers who filled their orders even during distress periods such as occurred in World War I when material was hard to get and

H. E. MOORHEAD





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Aliphatic Petroleum
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Alcohols and Acetates
Aromatic Solvents,
Petroleum and Coal Tar
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Oil and Fatty Acids
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DETROIT, WALnut 1-6350
FORT WAYNE, ANTHONY 0213
GRAND RAPIDS,
Grand Rapids 5-9111

HOUSTON, Orchard 6683
INDIANAPOLIS, ATLantic 1361
LOUISVILLE, Wobash 3393
MILWAUKEE, GREENFIELD 6-2630
NEW ORLEANS, TEMPLE 4666
ST. LOUIS, GARFIELD 3495
TOLEDO, Jorden 0761
WINDSOR, Ontario 4-4378

for a time, shortly after World War II. "We are deeply appreciative of the assistance given us by these manufacturers then," explains Alfred, "and we're still sticking by them in grateful remembrance of this aid at a time when we needed it most."

Now the company has grown large enough to utilize the services of 35 employees, many of whom have long service records with the organization. Continued expansion has made the present seemingly large quarters inadequate. Plans are now under consideration to convert part of the building and adding more space so that it will occupy the entire block with a loading platform at street level.

Alfred Richter is well-known in the industry as first chairman of the National Sanitary Supply Association. He called a meeting of six other distributors in St. Louis in 1922 to discuss common problems. From these beginnings the present N.S.S.A. received its start. Feeling the need for a more intimate group, Mr. Richter also helped form the Sanitation Associates and was its first secretary.

Both Richter brothers are active in local civic and fraternal affairs. Louis is also prominent in the Stewards Association and in political circles and is a member of the League of Municipalities of Greater St. Louis.

New Cigarette Urn

A new type cigarette urn which features a chrome dome to eliminate use of the receptacle for waste paper or as a spittoon has recently been added to the line of Franklin Metal Products Co., Chicago. The new urn is designed with a ledge having a 30° angle, which is too steep to hold a cigarette. The urn features a galvanized inner container designed to be one-quarter filled with water. In addition a sanitizing tablet may be dropped in the water to control odor and bacteria. The unit is said to be capable of holding 2000 or more cigarette butts. The chrome base is of non-tip design.

Vacuum Cleaner Hose

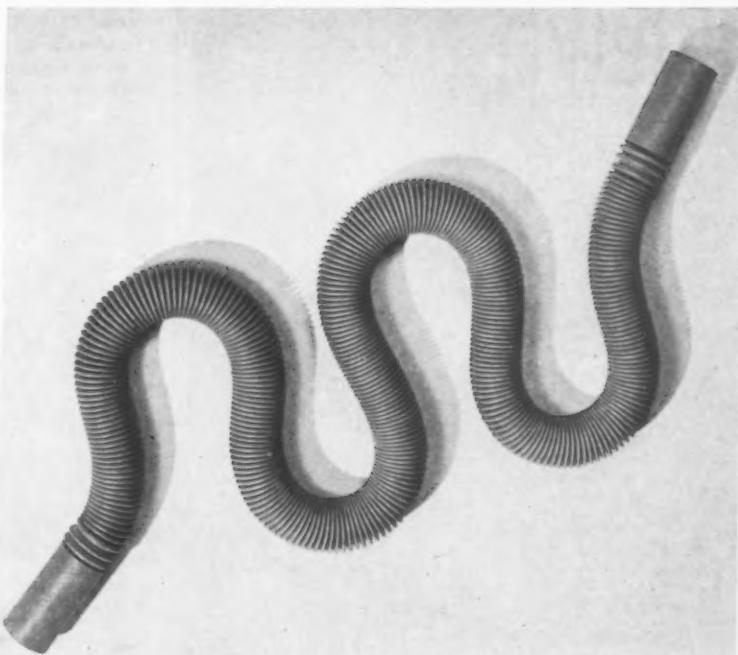
A data sheet on a new, extremely flexible hose for industrial vacuum cleaners was announced recently by Pullman Vacuum Cleaner Corp., Boston. Marketed under the registered trade name, "Accordion Hose," the new, heavy duty, gray rubber hose is $1\frac{1}{2}$ inches in diameter, has moulded ends, and is claimed to stretch from six to 16 feet. Its ability to stretch is claimed to give vacuum cleaners a greater working area, speed up the time required for vacuuming, and thus increase the value of the vacuum cleaner. The manufacturer claims the Neoprene hose can, without injury, be tied in knots, bent around sharp corners and be run over.

— ★ —

Stock Trade Board Pres.

Frederick J. Stock, vice-president of the commercial development division of Mathieson Chemical Corp., Baltimore, recently was elected president of the New York Board of Trade, succeeding James P. Fordyce, chairman of the board of Manhattan Life Insurance Co., who becomes chairman of the board of the Board of Trade. The election took place at a special luncheon meeting of the directors on Dec. 10, at the India House. It was attended by 35 of the Board's directors. Robert B. Magnus of Magnus, Mabee & Reynard, Inc., New York, is one of three vice-presidents of the New York Board of Trade. Mr. Stock is a former vice-president of the Board of Trade and previously was chairman of the Drug, Chemical and Allied Trades Section of the Board.

A native of Evansville, Ind., where he was born in 1908, Mr. Stock was graduated from the Purdue University School of Pharmacy in 1928. He joined Walgreen Co. that same year and remained with the firm until 1941, when he joined the Office of Production Management, predecessor organization to the War Production Board. He was chief of the Drug Branch of WPB until 1945, when he joined Chas. Pfizer and Co., Brooklyn as director and vice-president.



New flexible industrial vacuum cleaner hose of Pullman Vacuum Cleaner Co.,

Boston, being marketed under the trade name "Accordion Hose."

Weller Joins Spencer

The appointment of Paul L. Weller as manager of market research for Spencer Chemical Co., Kansas City, Mo., was announced recently. Previously he had been district sales manager of Wyandotte Chemicals Corp., Wyandotte, Mich., in Cincinnati, from 1951 until recently. Prior to this he had been director of market research for Wyandotte before going into sales. At one time, Mr. Weller was senior development engineer for Goodyear Tire and Rubber Co. in Akron.

New Adjustable Fog Gun

A new nozzle which can be adjusted to produce sprays ranging from a soft conical fog to a hard driving jet by turning a rubber-grip handle, was announced recently by Bete Fog Nozzle, Inc., Greenfield, Mass. A trigger shut-off for instant control is included with the nozzle. The new model "H5G,"

New adjustable nozzle of Bete Fog Nozzle, Inc., Greenfield, Mass., which produces sprays ranging from soft conical fog to hard driving jet.



NEW



Buckeye DY-DUST chemical FLOOR CLEANER and DUST CONTROLANT

cuts sweeping time 50%



- Absolutely safe.
- Faster, more efficient.
- Non-slip.
- Protects floor surface.
- Controls dust-borne microbes, and safeguards health!

Scientific control of dust and dirt on wood, terrazzo, tile, concrete, vinyl, rubber, marble, cork, and composition floor.

DAVIES-YOUNG SOAP COMPANY Dy-Dust
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Send free sample Have your representative call
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Thousands of Maintenance Managers
use AMERICAN STANDARD man-sized wet-mops, sweep mops and applicators exclusively. The nation's most successful distributors regularly supply those thousands of AMERICAN STANDARD enthusiasts.



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For years the VICTORY Wet Mop has been our biggest seller. Thousands of maintenance men use VICTORY wet mops exclusively! Heavy-duty, quality yarn . . . Your best bet, if you want a mop of extraordinary durability, performance and economy.

"BIG X" SWEEP MOP

This sweep mop is our leader. Snatches up dust on contact. It's nationally famous. A durable giant—available in widths up to 5 feet! Can be removed from the block for washing. Once you try BIG X, you'll use no other.



HOLZ-EM APPLICATOR

You'll enjoy the fast, thorough performance of this luxurious, high-speed applicator. Reduced cost of applying wax, seals, varnish, etc. More professional floor finishers use HOLZ-EM than any other applicator.

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Complete catalog of our nationally-advertised mops, applicators, dusters, mitts, and custom-made items, on request.

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AMERICAN STANDARD MFG. COMPANY
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SOAP and SANITARY CHEMICALS

with garden hose thread, works at pressures of from 30 to 150 pounds per square inch. It is made from bronze and other non-corrosive materials and costs \$9.95 complete with shut-off.

TGA Meets

(From Page 67)

the other a cream containing sodium lauryl sulfate. These products were found to remove only 22 percent of the oil from the hair, with water alone removing more than half this amount. This figure of 22 percent oil removal from hair becomes 68 percent when wool is used in the tests. This difference shows the fallacious nature of any conclusions drawn from wool tests when extrapolated to human hair. Results based on laboratory work with hair cuttings were corroborated by extracting hair which was shampooed on models and subsequently cut.

Silicones, their properties and uses in the cosmetic and allied fields were the subject of a paper by E. G. Tajkowski and T. H. Reilly, General Electric Co., Waterford, N. Y. After briefly outlining the history of silicones and touching upon the work of Kipping, the talk presented information on the preparation of intermediates and their conversion to silicone polymers of various types. After dealing with the commercially available types of silicones, their general properties and applications, more detailed data are given on silicone fluids and their role in cosmetic and pharmaceutical formulations. Because of their limited solubility characteristics in solvents common in these industries, silicones are used in emulsion form. Formulations were given for brushless shave cream and other typical products, and a new silicone fluid which is soluble in alcohol was mentioned.

Other presentations at this meeting included "Statistical Short-Cuts" by W. C. Frey and L. B. Dobie, Bristol-Myers Co., New York; "Psychometric Evaluation of Lipsticks" by Noel Schwartz and

Dean Foster, U. S. Testing Co., Hoboken, N. J.; and "Application of Control Chart Techniques" by Allegra H. Rodgers, E. R. Squibb & Sons, Division of Mathieson Chemical Corp., New York.

— ★ —

New Rat Bait Dispenser

Solvit Chemical Co., Madison, Wis., recently introduced "Kelly's Rodent Cafeteria," an all metal, weather resistant feeding station capable of holding one pint of liquid

rat poison and three pounds of dry poison or dry poison and water. The unit, which was designed especially for use with warfarin, is claimed to offer the following advantages: protection for pets and children, because it can be padlocked; labor saving inspection window for check on bait consumption; automatic feed hopper said to eliminate clogging; economy in bait, because the unit has a bottom and the feeding trough features a bent lip.

FOR MULTIPLE SALES AND GREATER PROFITS STOCK AND SELL *Bennett Bilt* **WASTE RECEPTACLES**

FOR AUTOMATIC CLEANLINESS

Industry, schools, institutions, sidewalks and wherever people congregate there are dozens of places for Bennett Bilt Waste Receptacles.

They are easy to stock and sell . . . no maintenance problems . . . you keep all the profits.

Only

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WASTE RECEPTACLES HAVE ALL THESE FEATURES

- Non-rusting stainless steel feet eliminate rusting and rust marks
- Made of extra heavy-gauge corrosion resistant steel
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- Smooth exterior surface . . . nothing to catch and tear clothes
- Reinforced corners
- Self-closing mechanism assures closed doors when not in use and permits easy opening of independent doors with finger-tip pressure
- Rounded corners for structural strength and pleasing appearance
- Baked enamel finish . . . green, gray or white

- These are a few of the many features that make Bennett Bilt Waste Receptacles a natural "buy". Quality and every consideration for hard usage are self-evident both inside and outside of these receptacles.

**FILL IN AND MAIL
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Kindly send to my personal attention the complete story on multiple Bennett profit potential.

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It used to be...
 "SLOW AS
 COLD MOLASSES"

NOW SONNEBORN
 OFFERS YOU
free-flowing
 PETROLEUM SULFONATES

SONNEBORN'S new ISO-PETRONATES are free flowing at room temperature. Now, for the first time, 62% concentrates can be used where steam is not available or where heating is difficult, assuring easier handling, suggesting new applications.

ISO-PETRONATES are but one example of the ability of SONNEBORN to adapt Petroleum Sulfonates to meet specialized requirements.

Where you require emulsification and dispersion of liquids... dispersion and wetting of solids... wetting and dispersion of liquid-solid systems... inhibition of rust and corrosion... one of the SONNEBORN oil soluble or water soluble Petroleum Sulfonates could be your answer.

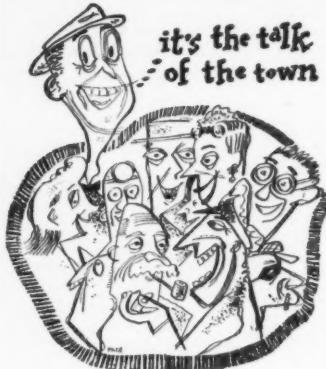
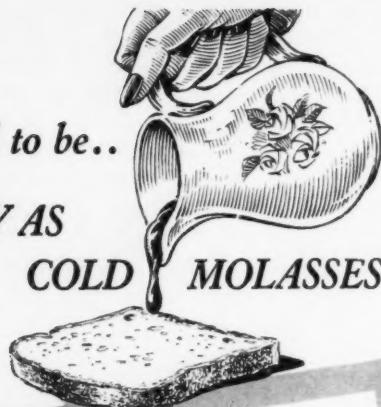
THE COUPON BELOW MAY BRING THE
 ANSWER TO YOUR PROBLEM. CLIP
 AND MAIL IT TODAY!



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Please send me technical data on Sonneborn's new Petroleum Sulfonates.
 We need specific information. Please have your representative call.

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 SNELL
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through the Harnessing of Atomic Energy to Audibly and Visibly Substantiate Product Superiority

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Avoid unnecessary costs and equipment investment. Charges below your own overhead made possible by specialization.

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- CASTILE SHAMPOO
- TOOTH PASTE
- CREAM SHAMPOO
- DEODORANTS
- PHARMACEUTICALS
- PINE DISINFECTANT
- INDUSTRIALS
- ALCOHOLIC PREPARATIONS

AUTOMATIC EQUIPMENT HANDLING
 Bottles • Jars • Collapsible Tubes

Please notice: All equipment—including soap crutchers and freezing tanks—is stainless steel.

OLD EMPIRE MFG. CHEMISTS, INC.
 Mt. Prospect & Verona Aves., Newark, N. J.
 HUmboldt 4-2121

Klarmann . . .

(From Page 157)

able precentages of hydroxesters, according to Lester I. Conrad, American Cholesterol Products, Inc., Milltown, N. J., who presented a paper entitled: "Newer Concepts of Lanolin Composition." Actually lanolin is a wax, wool fat being a misnomer. Composition varies widely with the nutritional, climatic, and other conditions to which the sheep are exposed in different localities. The nature of the hydroxesters present in lanolin was commented upon and analytical data presented to substantiate the outline of lanolin composition put forward by the speaker. These data were compared and correlated, where possible, with pertinent information obtained by other investigators. Possibilities for inducing chemical variations in lanolin were considered. Among cholesterols found to be present in lanolin is cerebrocholesterol, which, until recently, was believed to be present only in brain substance.

Other papers presented at this meeting included the following: "The Effect of Physical Factors on the Formation of Cosmetic Emulsions" by G. L. Stanko, W. C. Fiedler and G. J. Sperandio, Purdue University College of Pharmacy, Lafayette, Ind.; "Chromatography and its Application to the Essential Oil and Cosmetic Industries" by Alex Post, Polak's Frutal Works, Inc., Middletown; "A Method for a Semiquantitative Analysis of Lipsticks" by Hazel Bishop, Hazel Bishop, Inc., New York; "Guiding



ROBERT J. ZIPSE

Powell Post to Zipse

The appointment of Robert J. Zipse as domestic sales manager of the John Powell & Co., New York, division of Mathieson Chemical Corp., Baltimore, was announced Dec. 23, by Dr. Alfred Weed, division vice-president in charge of sales. R. H. Hodgson has been named as Mr. Zipse's assistant. Both men were with Geigy Chemical Corp., New York, prior to joining the Mathieson organization.

Mr. Zipse resigned from Geigy Chemical Corp. as sales manager of the Agricultural Chemicals Division early in November. He

Technical Research by Consumer Testing" by Norman H. Ishler, General Foods Corp., New York; "Chlorophylls in Cosmetics" by E. M. Burdick, American Chlorophyll Division, Strong Cobb & Co., New York.

Luncheon speaker was Walter Horvath, New York sales com-

Photo of banquet at which Dr. Klarmann was honored.



R. H. HODGSON

had been associated for the past seven years with the firm's insecticide division, which was recently reorganized as Geigy Agricultural Chemicals.

Mr. Hodgson was assistant general sales manager of the insecticide division of Geigy, a post to which he had been appointed last fall. Previously he had been assistant Southeast sales manager. A 1935 graduate of the University of Georgia, he was Southeast representative of the Multiwall Bag division of Union Bag & Paper Corp., New York, from 1940 until 1952, when he joined Geigy as state sales manager for Georgia.

sultant, who made suggestions on "How to Sell an Idea." He was introduced by Paul G. I. Lauffer, the society's president.

Moves to Larger Quarters

Removal of Huber Janitor Supplies, Inc., Wichita, Kans., to new quarters was announced recently. The firm's new home is said to offer greatly increased space.



Cosmetic Council of America Annual Awards Luncheon Dec. 26, 1952



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BONE DRY BLEACHED REFINED
DECOLORIZED IN FLAKES
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Fast colors for the New Synthetic Detergents in Red, Blue, Green, Amber and Yellow.

- We offer a full line of fast colors for all soap and soap products.
- Send for free samples.
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Two Ertel units that make small production efficient. They have all the desirable features of Ertel high production equipment: EFS-B FILTER has single hand wheel for simple trouble-free operation, bronze or stainless circulatory system, accommodates accepted Ertel Asbestos Filter Sheets. PORTABLE FILLER has automatic overflow system, non-drip spouts, bottle size flexibility up to gallons. And, both units can be easily moved from place to place. Write for detailed information on this important equipment...it belongs in your plant.

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COMPLETE LINE OF
Liquid Handling Equipment



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For over thirty years we have specialized in the analysis of pyrethrum, rotenone and other

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It has been our privilege to make many analyses for government agencies and most leading importers and manufacturers in the insecticide field.

We are also making frequent analyses of the synthetic insecticides, such as D.D.T., B.H.C., Chlordane, Toxaphene, Heptachlor, Allethrin, etc., etc.

Consultation without obligation

16 East 34th Street, New York 16, N. Y.

• Phone: MU 3-6368

Pyrethrin I

(From Page 147)

ment it was shown that the occluding acids, when carefully purified from chrysanthemic acid, cause little, if any reduction of Denigés reagent.

Mitchell, in a private communication, has confirmed that filtration to remove the barium sulphate precipitate causes considerable loss of chrysanthemic acid. Three different lots of pyrethrum concentrated extracts were analyzed by both methods and the loss calculated as pyrethrin I varied from seven to 13 percent. Acid was recovered from the barium sulphate precipitate and identified in one case by conversion into the p-phenylphenacyl ester, M.P. 64°C. (not depressed by the authentic ester M.P. 65°C) and in another case into the amide M.P. 127°C (not depressed by the authentic amide M.P. 131°C.)

Conclusions

IT is very evident that the official Method of the A.O.A.C. gives low results for pyrethrin for pyrethrin I, and those low results are not due to absorption of chrysanthemic acid on the barium sulphate as suggested by Martin and Brightwell, but to occlusion of an appreciable proportion by acids insoluble in water. These latter acids consist of three groups one of which is soluble in petroleum ether, and this

causes very little, if any, reduction of Denigés reagent.

Summary

IN a study of alternative techniques of conducting the mercury reduction method for the assay of pyrethrin I, it was found that the official technique of the A.O.A.C., which calls for filtration of the solution after acidification with sulphuric acid in order to remove barium sulphate, gives low results. These low results are caused by occlusion of a very appreciable proportion of the chrysanthemic acid in a flocculent precipitate of a group of acids. These acids do not reduce Denigés reagent to an extent that will affect the results of a normal analysis.

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Morningstar, Nicol V.P.

EARL C. LENZ, formerly vice-president and general sales manager of Paisley Products, Inc., New York, a subsidiary of Morningstar, Nicol, Inc., was recently elected vice-president of sales and advertising for the parent company and all of its subsidiaries. Mr. Lenz is now making his new headquarters at the firm's executive offices in New York City. He has been with the Paisley division for 21 years.

Riley Joins Towlsaver

THE appointment of John L. Riley, Jr., a district manager in the New York area was announced recently by Towlsaver, Inc., Los Angeles. Mr. Riley was formerly connected with the sales department of American Paper Goods Co., Pittsburgh. He is a graduate of Boston College.

Boston NSSA Meeting

A meeting of members of the National Sanitary Supply Association from the Boston area will be held Wednesday, January 20, at Gusties Restaurant, 1812 Commonwealth Ave., Cambridge. Cocktails are served beginning at 6:00 p.m., with dinner slated for 7:00 p.m. and the meeting at 8:00 p.m. W. James Reider, president of George T. Johnson Co., Medford, Mass., eastern regional vice-president of the National Sanitary Supply Assn., is general chairman for the meeting.

Table IV

Pyrethrin I on basis of 100 g. powder

Solution acidified with HCl, not filtered	869 mgs.
Solution acidified with H ² SO ⁴ (1:4) filtered	800 mgs.
1st reprecipitation	35.6 mg
2nd "	4.3 "
3rd "	3.6 "
4th "	2.5 "
5th "	2.9 "
6th "	1.8 "
Residue	28.5 "
	879.2 "
	8.0
	871.0 mgs

Less reagent blanks of 0.1 ml. each for reprecipitations

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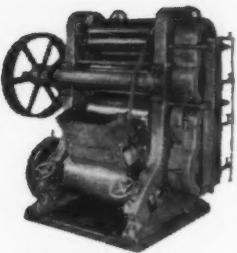
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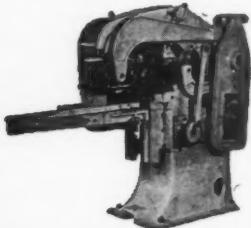
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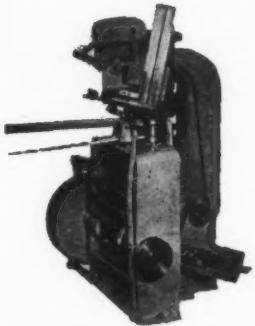
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(Continued on Page 179)

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See Page 28

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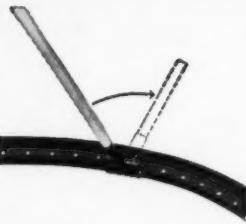
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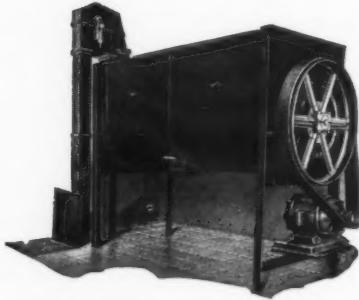
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For Sale: By I. E. Newman, 5602 Blackstone Ave. Chicago, Ill. Jones automatic laundry & toilet soap presses; 1500 lb. to 6000 lb. crutchers; 10" plodder; Automatic cutting table; Type S wrapper; Filter presses; Powder mixers, etc.

See Pages 124 and 125.

For Sale: Allbright-Nell 4' x 9' chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-foll W. C. 12" x 36" steel mill. Houchin 8½" x 16" 3-roll and 18" x 30" 4-roll Granite Stone Mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Empire State foot presses. Soap frames. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" x 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, Grinders, Hammer mills. Colloid mills. Three-roll steel mills 8" x 22" to 16" x 40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Company, 107—8th St. Brooklyn 15, N. Y. STerling 8-1944.

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Sanitary Chemicals, new, up-to-date book. See page 20.

For Sale: 1—Houchin 10" jumbo plodder; 1—Pneumatic Scale Packaging line complete; 1—Lehmann 12" Plodder; 1—Houchin 14" x 36" 5-roll inclined watercooled mill, 30 H.P. motor; 4—Jones automatic soap presses, A. B. K & C pin die; 1—4 roll 18 x 30 granite mill; 2 Package Machinery Co. model TT and model N soap wrappers; 5—Steel vertical, jacketed soap crutchers, 5,000 lb., 3,000 lb., and 1000 lb.; Filter presses 12" to 42", powder fillers; dry powder mixers, 12,000 lbs., 3,000 lb. and smaller sizes; paste and liquid mixers; Rotex screens; Hammer mills; soap frames; Dopp jacketed kettles; Pumps; tanks; carton gluer-sealers. Ask us to quote on your requirements. Tell us what idle machines or plants you have for sale. Consolidated Products Co., Inc., Observer Highway & Bloomfield St., Hoboken, New Jersey. Tel: HO 3-4425. N. Y. tel: BA 7-0600.

For Sale: Soap dispensers for waterless, cream, paste—porcelain enameled—heavy construction—10 pound capacity. National Soap Dispenser, 10216 L. Salle Ave., Los Angeles 47, Calif.

New Toxaphene Spray

Development of a toxaphene spray insecticide said to be economical, easy to apply, and to have good residual properties, was announced recently by Eston Chemicals Division of American Potash & Chemical Corp., Los Angeles. The new toxaphene formulation, trade-named "Estonox," is said to be effective against a number of plant and livestock pests under a wide range of conditions.



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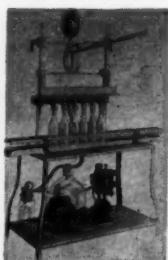
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THE trek to N. Y. and the annual meeting of the American soap and detergent industry, not forgetting glycerine, fatty acids, et al, under the auspices of the Association of American Soap & Glycerine Producers at the Waldorf Astoria is on. January 26-28 are the dates; Everybody and his Uncle Joe will be there. Roy Peet, Scott Pattison, Malcolm Miller and Ted Frascinelli tell us that once again it will be the largest soap industry convention in history.

* * *

When U.N. prisoners of war were returned in Korea during the big prisoner exchange, all the boys had to be thoroughly deloused with a DDT dust. Recently, we received a picture from Tokyo showing an infantryman, a returned Irish prisoner, smiling happily while a U.N. medic gave him the business with de-lousing powder. The medic was using a large hand duster with big letters along its side, H-U-D-S-O-N. No mistake about who made the duster. Either the photographer or the medic had an eye for practical publicity. The picture went out as an AP wirephoto all over the world. Nice break for Hudson.

* * *

In the November, 1953, issue of *The Crown*, house organ of the Crown Cork & Seal Co., Baltimore, is a three-page pictorial feature article, "The Penick Story." The story outlines the growth of the company since it was started in 1914 by S. Barksdale Penick (died May 24, 1953) to its present wide activities as manufacturer and "world's largest dealer in botanicals" with three American plants and one in England. Penick has been closely associated with the development of the modern insecticide spray and aerosol since their beginning. Two of the illustrations in the article bring out this point. The company today continues to be one of the largest suppliers to the trade of basic insecticide and rodenticide materials.

* * *

When first we saw Henry Brownstein, prez of Hysan of Chicago, at the CSMA meeting in Washington, we received quite a shock. Henry had changed, we noted. But, how? Our over-all observation was that his smiling countenance looked slightly naked. And then, we knew. Since the last time we had seen him, Henry had shaved off his coal-black mustachio. Although it has not been confirmed, the story is that Henry had discovered a grey hair midst the black of his luxurious upper-lip appendage and forthwith whipped out his razor and the deed was done. As quick as that.

* * *

Everything from the plague in Sardinia to pimples on milady's elbow is blamed on synthetic detergents these days. Now, from Sioux City, Iowa, comes word that synthetic detergents are responsible for a bad taste in the drinking water of

Omaha, Neb. It seems that things happened like this: . . . an oil pipeline broke and oil poured into the Missouri River from whence Omaha gets its water. Because oil floats on water, this would have caused no trouble if those demon synthetics had not entered the scene. But, Sioux City housewives, upstream, use such detergents which flowing into the Missouri emulsify the oil and the good people of Omaha instead of getting nice clear water, find they are pumping an emulsion of crude oil into their homes. Dat debbil, synthetics, has gone done it again!

* * *

Thanks to our many friends who have remembered us with holiday greeting cards again this year. It's always nice to have nice people think about you. The most appropriate card this year, we think, came from the Candys of Chicago,—

Ruth and Al Candy,—a reproduction of an old fashioned candy jar filled with colorful hard candy. Al is president of Candy & Co., Chicago.

* * *

"Soap Queen is hostess with the mostest," says a recent A.P. news item about Mrs. Tom Sayman of St. Louis. Active in 30 charitable and civic organizations, the widow of the fabulous Tom Sayman, president of Sayman Products Co. of St. Louis, makers of the long-used cactus juice toilet soap,—Mrs. Sayman not only is one of the mid-west's famous hostesses, she is also the active head of the widely known firm. Old timers will remember Tom Sayman, who died in 1937, for the team of stuffed horses in his private upstairs office and the big horse pistol which he kept in his desk drawer with which he used to scare the pants off many a young salesman. Mrs. Sayman, like Tom, they tell us is a charming rugged 18 karat individualist. Here's greetings, Hostess with the Mostest!

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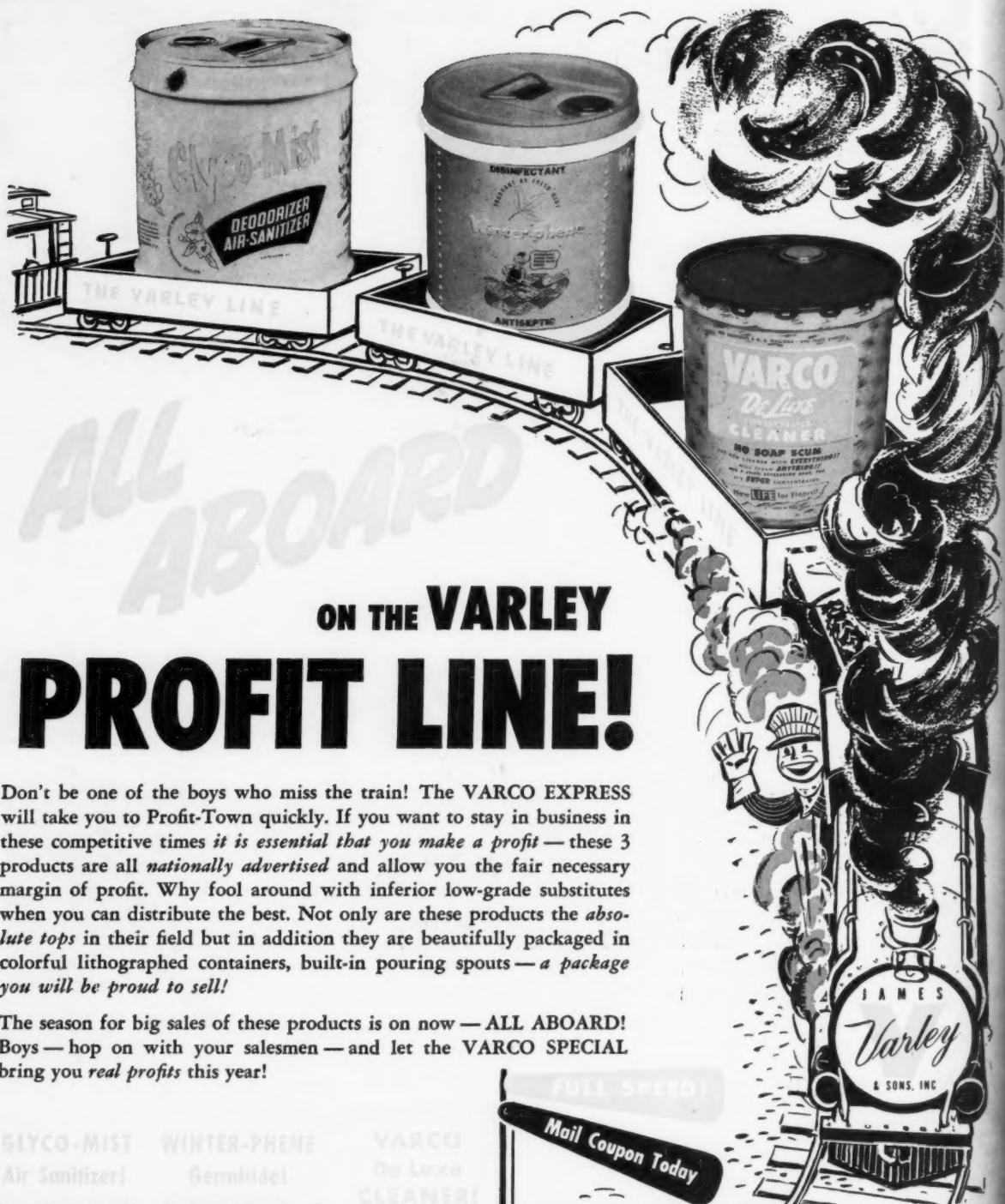
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